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 18-0610

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

SB, SS

Batch 18-0610

Package DP-18-0306

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

SB, SS

Batch 18-0610

Package DP-18-0306

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 2018.10.24 14:11:07 -04'00'

QC Chemist Approval: Digitally signed by devinec@battelle.org DN: cn=devinec@battelle.org Date: 2018.10.30 13:43:54 -04'00'

Project Manager Approval: Digitally signed by Jonathan Thorn Date: 2018.10.31 10:42:05 -04'00'

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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 18-0610

Package DP-18-0306

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3	***Tables*** Analytical Data Tables, Qualifier Definitions.	24

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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: 18-0610
Project/Site: Naval Base Ventura County
CTO: 4164

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CR988PB-FS	180507-02: Ottawa Sand	SEDIMENT	10/11/2018	10/11/2018
CR989LCS-FS	180507-02: Ottawa Sand	SEDIMENT	10/11/2018	10/11/2018
J8658-FS	VC-CS12-SS01-000H	SS	10/6/2018	10/9/2018
J8659-FS	VC-CS12-SB01-0102	SB	10/6/2018	10/9/2018
J8660-FS	VC-CS12-SB01-0506	SB	10/6/2018	10/9/2018
J8661-FS	VC-CS12-SS02-000H	SS	10/6/2018	10/9/2018
J8662-FS	VC-CS12-SB02-0102	SB	10/6/2018	10/9/2018
J8663-FS	VC-CS12-SB02-0506	SB	10/6/2018	10/9/2018
J8664-FS	VC-CS12-SS03-000H	SS	10/6/2018	10/9/2018
J8665-FS	VC-CS12-SB03-0102	SB	10/6/2018	10/9/2018
J8666-FS	VC-CS12-SB03-0506	SB	10/6/2018	10/9/2018
J8671-FS	VC-CS10-SS01-000H	SS	10/6/2018	10/9/2018
J8672-FS	VC-CS10-SB01-0102	SB	10/6/2018	10/9/2018
J8673-FS	VC-CS10-SB01-0506	SB	10/6/2018	10/9/2018
J8674-FS	VC-CS10-SS02-000H	SS	10/6/2018	10/9/2018
J8675-FS	VC-CS10-SB02-0102	SB	10/6/2018	10/9/2018
J8676-FS	VC-CS10-SB02-0506	SB	10/6/2018	10/9/2018

Miscellaneous Documentation

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QA/QC Summary
Batch 18-0610

Project:	CTO-4164 Naval Base Ventura County, California
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SS, SB
Data Set:	DP-18-0306
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
10/6/2018	10/9/2018	0.9, 1.1, and 1.7
Corrective Actions	None.	
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. Sample VC-CS12-SB01-0506 (J8660) was very viscous and difficult to weigh out.
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. Where detected in samples, PFOS is a mixture of linear and branched isomers

Holding Times	Extraction Date(s)	Analysis Date(s)
	10/11/2018	10/17, 19-20, 22/2018

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

QA/QC Summary
Batch 18-0610

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	MS/MSD not extracted with batch.
	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.

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: 18-0610
Data Set: DP-18-0306
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	NA	NA
Matrix Spike / Matrix Spike Duplicate Precision	NA	NA
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-18-0306
Project Number:	100110125-01	**Prep Batch Number:**	18-0610
Entered By:	Lauren Griffith	**Entered On:**	10/24/2018
Test Code (Matrix Type):	Master_369(S)		

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

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: 2018.10.24 14:21:53 -04'00'

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batch: 18-0610
Data Set: DP-18-0306

		CR988PB-FS (180507-02: Ottawa Sand)	CR989LCS-FS (180507-02: Ottawa Sand)	J8658-FS (VC-CS12-SS01-000H)	J8659-FS (VC-CS12-SB01-0102)	J8660-FS (VC-CS12-SB01-0506)	J8661-FS (VC-CS12-SS02-000H)
PFHxA	307-24-4	-	L	-	-	-	-
PFHpA	375-85-9	-	L	-	-	-	-
PFOA	335-67-1	-	L	-	-	-	-
PFNA	375-95-1	-	L	-	-	-	-
PFDA	335-76-2	-	L	-	-	-	-
PFUnA	2058-94-8	-	L	-	-	-	-
PFDoA	307-55-1	-	L	-	-	-	-
PFTrDA	72629-94-8	-	L	-	-	-	-
PFTeDA	376-06-7	-	L	-	-	-	-
NMeFOSAA	2355-31-9	-	L	-	-	-	-
NEtFOSAA	2991-50-6	-	L	-	-	-	-
PFBS	375-73-5	-	L	-	-	-	-
PFHxS	355-46-4	-	L/Br	-	-	-	-
PFOS	1763-23-1	-	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-

	J8662-FS (VC-CS12-SB02-0102)	J8663-FS (VC-CS12-SB02-0506)	J8664-FS (VC-CS12-SS03-000H)	J8665-FS (VC-CS12-SB03-0102)	J8666-FS (VC-CS12-SB03-0506)	J8671-FS (VC-CS10-SS01-000H)	J8672-FS (VC-CS10-SB01-0102)	J8673-FS (VC-CS10-SB01-0506)
PFHxA	-	-	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	-	-	-	-
PFHxS	L/Br	-	-	-	-	-	-	-
PFOS	-	-	-	-	-	-	-	-

"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-

	J8674-FS (VC-CS10-SS02-000H)	J8675-FS (VC-CS10-SB02-0102)	J8676-FS (VC-CS10-SB02-0506)
PFHxA	-	-	-
PFHpA	-	-	-
PFOA	-	-	-
PFNA	-	-	-
PFDA	-	-	-
PFUnA	-	-	-
PFDoA	-	-	-
PFTrDA	-	-	-
PFTeDA	-	-	-
NMeFOSAA	-	-	-
NEtFOSAA	-	-	-
PFBS	-	-	-
PFHxS	-	-	-
PFOS	-	-	-

"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-181009-01

Battelle Project No:0110125-01

Sample Receipt Form

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Tuesday, October 09, 2018 10:15 AM

No. of Shipping Containers: 3

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 3	Cooler	7831 4550 2170	Custody Seals	Intact	Intact	Therm_1	0.9	14
2 of 3	Cooler	7831 4550 2180	Custody Seals	Intact	Intact	Therm_1	1.1	39
3 of 3	Cooler	7831 4550 2191	Custody Seals	Intact	Intact	Therm_1	1.7	12

Samples

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

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

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

Temperature upon receipt (°C): 1.7 Temperature Blank used ☑ Yes ☐ No
(Note: If temperature upon receipt differs from required conditions, see sample log comment field)

Samples Acidified: ☐ Yes ☐ No ☑ Unknown

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

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

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

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

Storage Location: Custody: Refrigerator - R0119 (NA) **BDO IDs Assigned:** J8658 - J8722

Samples logged in by: Schumitz, Matt **Date/Time:** 10/09/2018 10:15 AM

Approved By: **Approved On:**

Authorized By: **Authorized On:**

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ShpNo SHP-181009-01

Battelle Project No:)110125-01

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Tuesday, October 09, 2018 10:15 AM

No. of Shipping Containers: 3

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8658	VC-CS12-SS01-000H	10/06/18 8:25	10/09/18 14:33	1	SS	1.7	NA	NA	NA	R0119 (NA)			
J8659	VC-CS12-SB01-0102	10/06/18 8:26	10/09/18 14:33	1	SB	1.7	NA	NA	NA	R0119 (NA)			
J8660	VC-CS12-SB01-0506	10/06/18 8:34	10/09/18 14:34	1	SB	1.7	NA	NA	NA	R0119 (NA)			
J8661	VC-CS12-SS02-000H	10/06/18 11:07	10/09/18 14:34	1	SS	1.7	NA	NA	NA	R0119 (NA)			
J8662	VC-CS12-SB02-0102	10/06/18 11:09	10/09/18 14:34	1	SB	1.7	NA	NA	NA	R0119 (NA)			
J8663	VC-CS12-SB02-0506	10/06/18 11:13	10/09/18 14:35	1	SB	1.7	NA	NA	NA	R0119 (NA)			
J8664	VC-CS12-SS03-000H	10/06/18 10:06	10/09/18 14:35	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8665	VC-CS12-SB03-0102	10/06/18 10:07	10/09/18 14:35	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8666	VC-CS12-SB03-0506	10/06/18 10:12	10/09/18 14:36	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8667	VC-CS12-DW01-1018	10/06/18 8:44	10/09/18 14:36	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8668	VC-CS12-DW01P-1018	10/06/18 8:48	10/09/18 14:37	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8669	VC-CS12-DW02-1018	10/06/18 11:22	10/09/18 14:37	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8670	VC-CS12-DW03-1018	10/06/18 10:30	10/09/18 14:38	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8671	VC-CS10-SS01-000H	10/06/18 13:02	10/09/18 14:39	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8672	VC-CS10-SB01-0102	10/06/18 13:04	10/09/18 14:40	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8673	VC-CS10-SB01-0506	10/06/18 13:10	10/09/18 14:41	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8674	VC-CS10-SS02-000H	10/06/18 9:55	10/09/18 14:41	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8675	VC-CS10-SB02-0102	10/06/18 9:58	10/09/18 14:41	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8676	VC-CS10-SB02-0506	10/06/18 10:06	10/09/18 14:42	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8677	VC-CS10-SS03-000H	10/06/18 11:31	10/09/18 14:43	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8678	VC-CS10-SB03-0102	10/06/18 11:33	10/09/18 14:43	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8679	VC-CS10-SB03-0506	10/06/18 11:37	10/09/18 14:43	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8680	VC-CS10-SS04-000H	10/06/18 10:35	10/09/18 14:43	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8681	VC-CS10-SB04-0102	10/06/18 10:38	10/09/18 14:44	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8682	VC-CS10-SB04-0506	10/06/18 10:41	10/09/18 14:44	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8683	VC-CS10-DW01-1018	10/06/18 13:38	10/09/18 14:45	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8684	VC-CS10-DW02-1018	10/06/18 10:30	10/09/18 14:46	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8685	VC-CS10-DW02P-1018	10/06/18 10:40	10/09/18 14:46	2	GW	0.9	NA	NA	NA	R0119 (NA)			

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ShpNo SHP-181009-01

Battelle Project No:)110125-01

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Tuesday, October 09, 2018 10:15 AM

No. of Shipping Containers: 3

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8686	VC-CS10-DW03-1018	10/06/18 12:07	10/09/18 14:46	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8687	VC-CS10-DW04-1018	10/06/18 10:55	10/09/18 14:46	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8688	VC-CS18-DW01-1018	10/06/18 15:18	10/09/18 14:47	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8689	VC-CS10-SD01-000H	10/06/18 13:28	10/09/18 14:48	1	SD	0.9	NA	NA	NA	R0119 (NA)			
J8690	VC-CS10-SD01-0102	10/06/18 13:30	10/09/18 14:48	1	SD	0.9	NA	NA	NA	R0119 (NA)			
J8691	VC-CS18-SS01-000H	10/06/18 13:52	10/09/18 14:49	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8692	VC-CS18-SB01-0102	10/06/18 13:54	10/09/18 14:49	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8693	VC-CS18-SB01-0506	10/06/18 14:00	10/09/18 14:50	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8694	VC-CS00-SS01-000H	10/06/18 14:05	10/09/18 14:52	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8695	VC-CS00-SB01-0102	10/06/18 14:07	10/09/18 14:53	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8696	VC-CS00-SB01-0506	10/06/18 14:10	10/09/18 14:58	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8697	VC-CS00-SS02-000H	10/06/18 15:22	10/09/18 14:59	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8698	VC-CS00-SB02-0102	10/06/18 15:23	10/09/18 14:59	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8699	VC-CS00-SB02-0506	10/06/18 15:27	10/09/18 15:00	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8700	VC-CS00-SS03-000H	10/06/18 16:15	10/09/18 15:00	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8701	VC-CS00-SB03-0102	10/06/18 16:18	10/09/18 15:06	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8702	VC-CS00-SB03-0506	10/06/18 16:25	10/09/18 15:07	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8703	VC-CS00-SS04-000H	10/06/18 13:13	10/09/18 15:07	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8704	VC-CS00-SB04-0102	10/06/18 13:15	10/09/18 15:07	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8705	VC-CS00-SB04-0506	10/06/18 13:20	10/09/18 15:07	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8706	VC-CS00-SS05-000H	10/06/18 17:17	10/09/18 15:08	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8707	VC-CS00-SB05-0102	10/06/18 17:19	10/09/18 15:09	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8708	VC-CS00-SB05-0506	10/06/18 17:24	10/09/18 15:09	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8709	VC-CS00-SS06-000H	10/06/18 17:05	10/09/18 15:09	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8710	VC-CS00-SB06-0102	10/06/18 17:07	10/09/18 15:10	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8711	VC-CS00-SB06-0506	10/06/18 17:10	10/09/18 15:10	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8712	VC-CS00-SB06-0506-MS	10/06/18 17:10	10/09/18 15:10	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8713	VC-CS00-SB06-0506-MSD	10/06/18 17:10	10/09/18 15:11	1	SB	1.1	NA	NA	NA	R0119 (NA)			

BATTELLE
It can be done

ShpNo SHP-181009-01

Battelle Project No:)110125-01

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Tuesday, October 09, 2018 10:15 AM

No. of Shipping Containers: 3

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8714	VC-FB11-10062018	10/06/18 18:34	10/09/18 15:11	2	AQ	0.9	NA	NA	NA	R0119 (NA)			
J8715	VC-EB11-10062018	10/06/18 18:36	10/09/18 15:11	2	AQ	0.9	NA	NA	NA	R0119 (NA)			
J8716	VC-CS00-DW01-1018	10/06/18 14:32	10/09/18 15:12	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8717	VC-CS00-DW02-1018	10/06/18 16:25	10/09/18 15:12	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8718	VC-CS00-DW02P-1018	10/06/18 16:27	10/09/18 15:14	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8719	VC-CS00-DW03-1018	10/06/18 17:05	10/09/18 15:14	2	GW	1.1	NA	NA	NA	R0119 (NA)			
J8720	VC-CS00-DW04-1018	10/06/18 13:30	10/09/18 15:15	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8721	VC-CS00-DW05-1018	10/06/18 18:02	10/09/18 15:15	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8722	VC-CS00-DW06-1018	10/06/18 17:40	10/09/18 15:15	2	GW	1.7	NA	NA	NA	R0119 (NA)			

Total Samples: 65

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM CS12	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 # 06
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-CS12-SS01-000H	10/6/18	0825	Grab	SS	1	X	J8658
VC-CS12-SB01-0102	10/6/18	0826	Grab	SB	1	X	59
VC-CS12-SB01-0506	10/6/18	0834	Grab	SB	1	X	60
VC-CS12-SS02-000H	10/6/18	1107	Grab	SS	1	X	61
VC-CS12-SB02-0102	10/6/18	1109	Grab	SB	1	X	62
VC-CS12-SB02-0506	10/6/18	1113	Grab	SB	1	X	63
VC-CS12-SS03-000H	10/6/18	1006	Grab	SS	1	X	64
VC-CS12-SB03-0102	10/6/18	1007	Grab	SB	1	X	65
VC-CS12-SB03-0506	10/6/18	1012	Grab	SB	1	X	J8666
~~VC-CS12-SB03-~~			Grab	SB	1	X	
~~VC-CS12-S-MS~~			Grab			X	
~~VC-CS12-S-SD~~			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	Jacobs	10/8/18 0800		Battelle	10-9-18 1015
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 CS12	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 #: 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page#: 2 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.		
VC-CS12-DW01-1018	10/6/18	0844	Grab	GW	2	X	J8667
VC-CS12-DW01P-1018	10/6/18	0848	Grab	GW	2	X	J8668
VC-CS12-DW02-1018	10/6/18	1122	Grab	GW	2	X	J8669
VC-CS12-DW03-1018	10/6/18	1030	Grab	GW	2	X	J8670
~~FDT-AQ-FB-~~			~~Grab~~	~~AQ~~		~~X~~	
~~FDT-AQ-EB-~~			~~Grab~~	~~AQ~~		~~X~~	

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	10/8/18 0800		Battelle	10-9-18 1015
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 CS10 ~~CS15~~	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): J. Kilbert Phone: 724-977-3628 Email: victoria.kilbert@jacobs.com Turnaround Time (TAT) Requested:	Preservative: NA	COC #: 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page#: 3 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
VC-CS10-SS01-000H	10/6/18	1302	Grab	SS	1	X	J8671
VC-CS10-SB01-0102	10/6/18	1304	Grab	SB	1	X	72
VC-CS10-SB01-0506	10/6/18	1310	Grab	SB	1	X	73
VC-CS10-SS02-000H	10/6/18	0955	Grab	SS	1	X	74
VC-CS10-SB02-0102	10/6/18	0958	Grab	SB	1	X	75
VC-CS10-SB02-0506	10/6/18	1006	Grab	SB	1	X	76
VC-CS10-SS03-000H	10/6/18	1131	Grab	SS	1	X	77
VC-CS10-SB03-0102	10/6/18	1133	Grab	SB	1	X	78
VC-CS10-SB03-0506	10/6/18	1137	Grab	SB	1	X	79
VC-CS10-SS04-000H	10/6/18	1035	Grab	SS	1	X	80
VC-CS10-SB04-0102	10/6/18	1038	Grab	SB	1	X	81
VC-CS10-SB04-0506	10/6/18	1041	Grab	SB	1	X	J8682

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	10/8/18 0800		Battelle	10-9-18 1015
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 CS10 & CS18	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:		
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST		COC # 06 Page# 4 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod	
VC-CS10-DW01-1018	10/6/18	1338	Grab	GW	2		X	J8683
VC-CS10-DW02-1018	10/6/18	1030	Grab	GW	2		X	J8684
VC-CS10-DW02P-1018	10/6/18	1040	Grab	GW	2		X	J8685
VC-CS10-DW03-1018	10/6/18	1207	Grab	GW	2		X	J8686
VC-CS10-DW04-1018	10/6/18	1055	Grab	GW	2		X	J8687
~~FDT-AQ-FB~~			~~Grab~~	~~AQ~~			~~X~~	
~~FDT-AQ-EB~~			~~Grab~~	~~AQ~~			~~X~~	
VC-CS18-DW01-1018	10/6/18	1518	Grab	GW	2		X	J8688

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	10/8/18 0808		Battelle	10-9-18 1015
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:	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:	PM CS10 & CS18	COC # 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST		Page# 5 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod	
VC-CS10-SD01-000H	10/6/18	1328	Grab	SD	1		X	J8689
VC-CS10-SD01-0102	10/6/18	1330	Grab	SD	1		X	J8690
~~VC-CS10-S-MS~~			~~Grab~~				~~X~~	
~~VC-CS10-S-SD~~			~~Grab~~				~~X~~	
~~FDT-SO-EB~~			~~Grab~~	~~AQ~~			~~X~~	
~~FDT-SO-EB~~			~~Grab~~	~~AQ~~			~~X~~	
VC-CS18-SS01-000H	10/6/18	1352	Grab	SS	1		X	J8691
VC-CS18-SB01-0102	10/6/18	1354	Grab	SB	1		X	J8692
VC-CS18-SB01-0506	10/6/18	1400	Grab	SB	1		X	J8693

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:
Victoria Kilbert	Jacobs	10/8/18 0800		Battelle	10-9-18 1015
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 CS00	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 #: 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X 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-CS00-SS01-000H	10/6/18	1405	Grab	SS	1	X	J8694
VC-CS00-SB01-0102	10/6/18	1407	Grab	SB	1	X	95
VC-CS00-SB01-0506	10/6/18	1410	Grab	SB	1	X	96
VC-CS00-SS02-000H	10/6/18	1522	Grab	SS	1	X	97
VC-CS00-SB02-0102	10/6/18	1523	Grab	SB	1	X	98
VC-CS00-SB02-0506	10/6/18	1527	Grab	SB	1	X	99
VC-CS00-SS03-000H	10/6/18	1615	Grab	SS	1	X	J8700
VC-CS00-SB03-0102	10/6/18	1618	Grab	SB	1	X	01
VC-CS00-SB03-0506	10/6/18	1625	Grab	SB	1	X	02
VC-CS00-SS04-000H	10/6/18	1313	Grab	SS	1	X	03
VC-CS00-SB04-0102	10/6/18	1315	Grab	SB	1	X	04
VC-CS00-SB04-0506	10/6/18	1320	Grab	SB	1	X	J8705

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	10/8/18 0800		Battelle	10-9-18 1015
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 CS00	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 #: 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal ☒ 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.		
VC-CS00-SS05-000H	10/6/18	1717	Grab	SS	1	X	J8706
VC-CS00-SB05-0102	10/6/18	1719	Grab	SB	1	X	07
VC-CS00-SB05-0506	10/6/18	1724	Grab	SB	1	X	08
VC-CS00-SS06-000H	10/6/18	1705	Grab	SS	1	X	09
VC-CS00-SB06-0102	10/6/18	1707	Grab	SB	1	X	10
VC-CS00-SB06-0506	10/6/18	1710	Grab	SB	1	X	11
VC-~~CS94-S~~ CS00-SB06-0506-MS	10/6/18	1710	Grab	SB	1	X	MS 12
VC-~~CS94-S~~ CS00-SB06-0506-MSD	10/6/18	1710	Grab	SB	1	X	MSD 13
VC-~~FDT~~SO-FB11-10062018	10/6/18	1834	Grab	AQ	2	X	14
VC-~~FDT~~SO-EB11-10062018	10/6/18	1836	Grab	AQ	2	X	on bowl J8715
							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	10/8/18 0850		Battelle	10-9-18 1015
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. Kilbert
Phone: 724-977-3628
Email: victoria.kilbert@jacobs.com
Turnaround Time (TAT) Requested:

Project Name: NBVC Basewide SI
Project No.: 695803

Normal [X]
Priority [ ]
RUSH [ ]
Time Zone: PST

Sampling Site: PM CS00

Site Information:

COC # 06

Page# 8 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod	
VC-CS00-DW01-1018	10/6/18	1432	Grab	GW	2		X	J8716
VC-CS00-DW02-1018	10/6/18	1625	Grab	GW	2		X	J8717
VC-CS00-DW02P-1018	10/6/18	1627	Grab	GW	2		X	J8718
VC-CS00-DW03-1018	10/6/18	1705	Grab	GW	2		X	(1) ~~J78~~ J8719
VC-CS00-DW04-1018	10/6/18	1330	Grab	GW	2		X	J8720
VC-CS00-DW05-1018	10/6/18	1802	Grab	GW	2		X	J8721
VC-CS00-DW06-1018	10/6/18	1740	Grab	GW	2		X	J8722
~~FDT-AQ-FB~~			Grab	AQ			X	
~~FDT-AQ-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	10/8/18 0800		Battelle	10-9-18 1015
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:

(1) MDS Wrong Number 10-9-18

(724) 977-3628
ERT
Y STE 1450
92101
US
SHIP DATE: 080CT18
ACTWGT: 53.90 LB
CAD: 6997666/SSF01922
DIMS: 26x13x14 IN
BILL THIRD PARTY
AN THORN
LE
IGWATER DR. STE 202
LL MA 02061
REF:
DEPT:
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4550 2170
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XPUA
TUE – 09 OCT 10:
PRIORITY OVERNIG
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MA-US B

IGIN ID:OXRA (724) 977-3628
ICTORIA KILBERT
PO 695803
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US
SHIP DATE: 080CT18
ACTWGT: 66.50 LB
CAD: 6997666/SSF01922
DIMS: 26x14x14 IN
BILL THIRD PARTY
TO JONATHAN THORN
BATTELLE
141 LONGWATER DR. STE 202
NORWELL MA 02061
(781) 681-5666
INV:
PO:
REF:
DEPT:
1.1° TB
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PRIORITY OVERNIGHT
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02061
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2180
10.09

ORIGIN ID:OXRA (724) 977-3628
VICTORIA KILBERT
PO 695803
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US
SHIP DATE: 080CT1
ACTWGT: 51.60 LB
CAD: 6997666/SSFO
DIMS: 23x15x16 IN
BILL THIRD PARTY
TO JONATHAN THORN
BATTELLE
141 LONGWATER DR. STE 202
NORWELL MA 02061
(781) 681-5666
INV:
PO:
REF:
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MPS# 0263 7831 4550 2191
Mstr# 7831 4550 2170
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2191
10.09

RT 246 1
10:30 B

Data Tables

BATTELLE
It can be done

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

Client ID		VC-CS12-SS01-000H				
Battelle ID		J8658-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		1.99				
Matrix		SS				
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	0.30	J	0.22	0.50	5.00
PFOS	1763-23-1	2.21	J	0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	79
13C8-PFOA	86
13C9-PFNA	68
13C6-PFDA	82
13C7-PFUnA	84
13C2-PFDoA	84
13C2-PFTeDA	81
d3-MeFOSAA	68
d5-EtFOSAA	69
13C3-PFBS	97
13C3-PFHxS	95
13C8-PFOS	91

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

Client ID		VC-CS12-SB01-0102				
Battelle ID		J8659-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		5.62				
Matrix		SB				
Sample Size		1.86				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	0.48	J	0.35	1.08	5.38
PFHpA	375-85-9	1.08	U	0.47	1.08	5.38
PFOA	335-67-1	1.65	J	0.54	1.08	5.38
PFNA	375-95-1	1.08	U	0.46	1.08	5.38
PFDA	335-76-2	1.08	U	0.29	1.08	5.38
PFUnA	2058-94-8	1.08	U	0.44	1.08	5.38
PFDoA	307-55-1	0.54	U	0.26	0.54	5.38
PFTrDA	72629-94-8	1.08	U	0.30	1.08	5.38
PFTeDA	376-06-7	2.15	U	0.68	2.15	5.38
NMeFOSAA	2355-31-9	2.69	U	1.20	2.69	5.38
NEtFOSAA	2991-50-6	2.15	U	0.61	2.15	5.38
PFBS	375-73-5	1.08	U	0.39	1.08	5.38
PFHxS	355-46-4	2.41	J	0.24	0.54	5.38
PFOS	1763-23-1	1.45	J	0.29	1.08	5.38

Surrogate Recoveries (%)

13C5-PFHxA	79
13C4-PFHpA	87
13C8-PFOA	87
13C9-PFNA	73
13C6-PFDA	89
13C7-PFUnA	94
13C2-PFDoA	82
13C2-PFTeDA	90
d3-MeFOSAA	52
d5-EtFOSAA	51
13C3-PFBS	93
13C3-PFHxS	80
13C8-PFOS	83

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

Client ID		VC-CS12-SB01-0506			
Battelle ID		J8660-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		25.42			
Matrix		SB			
Sample Size		1.66			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.20 U	0.40	1.20	6.02
PFHpA	375-85-9	1.20 U	0.53	1.20	6.02
PFOA	335-67-1	1.20 U	0.60	1.20	6.02
PFNA	375-95-1	1.20 U	0.52	1.20	6.02
PFDA	335-76-2	1.20 U	0.33	1.20	6.02
PFUnA	2058-94-8	1.20 U	0.49	1.20	6.02
PFDoA	307-55-1	0.60 U	0.29	0.60	6.02
PFTrDA	72629-94-8	1.20 U	0.34	1.20	6.02
PFTeDA	376-06-7	2.41 U	0.76	2.41	6.02
NMeFOSAA	2355-31-9	3.01 U	1.35	3.01	6.02
NEtFOSAA	2991-50-6	2.41 U	0.69	2.41	6.02
PFBS	375-73-5	1.20 U	0.43	1.20	6.02
PFHxS	355-46-4	0.60 U	0.27	0.60	6.02
PFOS	1763-23-1	1.20 U	0.33	1.20	6.02

Surrogate Recoveries (%)

13C5-PFHxA	76
13C4-PFHpA	82
13C8-PFOA	82
13C9-PFNA	67
13C6-PFDA	74
13C7-PFUnA	72
13C2-PFDoA	74
13C2-PFTeDA	76
d3-MeFOSAA	54
d5-EtFOSAA	55
13C3-PFBS	81
13C3-PFHxS	74
13C8-PFOS	75

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

Client ID		VC-CS12-SS02-000H			
Battelle ID		J8661-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.56			
Matrix		SS			
Sample Size		1.98			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.61 J	0.33	1.01	5.05
PFHpA	375-85-9	0.46 J	0.44	1.01	5.05
PFOA	335-67-1	1.01 U	0.51	1.01	5.05
PFNA	375-95-1	1.01 U	0.43	1.01	5.05
PFDA	335-76-2	1.01 U	0.27	1.01	5.05
PFUnA	2058-94-8	1.01 U	0.41	1.01	5.05
PFDoA	307-55-1	0.51 U	0.24	0.51	5.05
PFTrDA	72629-94-8	1.01 U	0.28	1.01	5.05
PFTeDA	376-06-7	2.02 U	0.64	2.02	5.05
NMeFOSAA	2355-31-9	2.53 U	1.13	2.53	5.05
NEtFOSAA	2991-50-6	2.02 U	0.58	2.02	5.05
PFBS	375-73-5	0.45 J	0.36	1.01	5.05
PFHxS	355-46-4	2.07 J	0.22	0.51	5.05
PFOS	1763-23-1	1.98 J	0.27	1.01	5.05

Surrogate Recoveries (%)

13C5-PFHxA	85
13C4-PFHpA	86
13C8-PFOA	94
13C9-PFNA	75
13C6-PFDA	90
13C7-PFUnA	91
13C2-PFDoA	90
13C2-PFTeDA	92
d3-MeFOSAA	59
d5-EtFOSAA	62
13C3-PFBS	97
13C3-PFHxS	86
13C8-PFOS	81

BATTELLE
It can be done

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

Client ID		VC-CS12-SB02-0102				
Battelle ID		J8662-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		7.95				
Matrix		SB				
Sample Size		1.87				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	0.95	J	0.35	1.07	5.35
PFHpA	375-85-9	0.91	J	0.47	1.07	5.35
PFOA	335-67-1	3.78	J	0.53	1.07	5.35
PFNA	375-95-1	1.07	U	0.46	1.07	5.35
PFDA	335-76-2	1.07	U	0.29	1.07	5.35
PFUnA	2058-94-8	1.07	U	0.44	1.07	5.35
PFDoA	307-55-1	0.53	U	0.26	0.53	5.35
PFTrDA	72629-94-8	1.07	U	0.30	1.07	5.35
PFTeDA	376-06-7	2.14	U	0.67	2.14	5.35
NMeFOSAA	2355-31-9	2.67	U	1.20	2.67	5.35
NEtFOSAA	2991-50-6	2.14	U	0.61	2.14	5.35
PFBS	375-73-5	1.07	U	0.39	1.07	5.35
PFHxS	355-46-4	7.01		0.24	0.53	5.35
PFOS	1763-23-1	1.78	J	0.29	1.07	5.35

Surrogate Recoveries (%)

13C5-PFHxA	78
13C4-PFHpA	81
13C8-PFOA	87
13C9-PFNA	74
13C6-PFDA	82
13C7-PFUnA	87
13C2-PFDoA	84
13C2-PFTeDA	85
d3-MeFOSAA	69
d5-EtFOSAA	70
13C3-PFBS	107
13C3-PFHxS	92
13C8-PFOS	95

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

Client ID		VC-CS12-SB02-0506			
Battelle ID		J8663-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		33.66			
Matrix		SB			
Sample Size		1.36			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.56 J	0.49	1.47	7.35
PFHpA	375-85-9	1.47 U	0.65	1.47	7.35
PFOA	335-67-1	1.31 J	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	0.86 J	0.32	0.74	7.35
PFOS	1763-23-1	1.47 U	0.40	1.47	7.35

Surrogate Recoveries (%)

13C5-PFHxA	79
13C4-PFHpA	85
13C8-PFOA	87
13C9-PFNA	72
13C6-PFDA	89
13C7-PFUnA	96
13C2-PFDoA	84
13C2-PFTeDA	97
d3-MeFOSAA	58
d5-EtFOSAA	59
13C3-PFBS	84
13C3-PFHxS	82
13C8-PFOS	73

BATTELLE
It can be done

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

Client ID		VC-CS12-SS03-000H			
Battelle ID		J8664-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		2.18			
Matrix		SS			
Sample Size		1.92			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.04 U	0.34	1.04	5.21
PFHpA	375-85-9	1.04 U	0.46	1.04	5.21
PFOA	335-67-1	1.04 U	0.52	1.04	5.21
PFNA	375-95-1	1.04 U	0.45	1.04	5.21
PFDA	335-76-2	1.04 U	0.28	1.04	5.21
PFUnA	2058-94-8	1.04 U	0.43	1.04	5.21
PFDoA	307-55-1	0.52 U	0.25	0.52	5.21
PFTrDA	72629-94-8	1.04 U	0.29	1.04	5.21
PFTeDA	376-06-7	2.08 U	0.66	2.08	5.21
NMeFOSAA	2355-31-9	2.60 U	1.17	2.60	5.21
NEtFOSAA	2991-50-6	2.08 U	0.59	2.08	5.21
PFBS	375-73-5	1.04 U	0.38	1.04	5.21
PFHxS	355-46-4	0.28 J	0.23	0.52	5.21
PFOS	1763-23-1	3.08 J	0.28	1.04	5.21

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	92
13C8-PFOA	92
13C9-PFNA	77
13C6-PFDA	85
13C7-PFUnA	90
13C2-PFDoA	85
13C2-PFTeDA	89
d3-MeFOSAA	66
d5-EtFOSAA	63
13C3-PFBS	86
13C3-PFHxS	87
13C8-PFOS	84

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

Client ID		VC-CS12-SB03-0102				
Battelle ID		J8665-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/22/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		7.16				
Matrix		SB				
Sample Size		1.88				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.06	U	0.35	1.06	5.32
PFHpA	375-85-9	1.06	U	0.47	1.06	5.32
PFOA	335-67-1	1.06	U	0.53	1.06	5.32
PFNA	375-95-1	1.06	U	0.46	1.06	5.32
PFDA	335-76-2	1.06	U	0.29	1.06	5.32
PFUnA	2058-94-8	1.06	U	0.44	1.06	5.32
PFDoA	307-55-1	0.53	U	0.26	0.53	5.32
PFTrDA	72629-94-8	1.06	U	0.30	1.06	5.32
PFTeDA	376-06-7	2.13	U	0.67	2.13	5.32
NMeFOSAA	2355-31-9	2.66	U	1.19	2.66	5.32
NEtFOSAA	2991-50-6	2.13	U	0.61	2.13	5.32
PFBS	375-73-5	1.06	U	0.38	1.06	5.32
PFHxS	355-46-4	0.89	J	0.23	0.53	5.32
PFOS	1763-23-1	1.04	J	0.29	1.06	5.32

Surrogate Recoveries (%)

13C5-PFHxA	86
13C4-PFHpA	87
13C8-PFOA	86
13C9-PFNA	86
13C6-PFDA	86
13C7-PFUnA	92
13C2-PFDoA	95
13C2-PFTeDA	98
d3-MeFOSAA	70
d5-EtFOSAA	68
13C3-PFBS	95
13C3-PFHxS	92
13C8-PFOS	101

BATTELLE
It can be done

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

Client ID		VC-CS12-SB03-0506				
Battelle ID		J8666-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		37.44				
Matrix		SB				
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	1.56	U	0.42	1.56	7.81

Surrogate Recoveries (%)

13C5-PFHxA	73
13C4-PFHpA	80
13C8-PFOA	85
13C9-PFNA	67
13C6-PFDA	77
13C7-PFUnA	84
13C2-PFDoA	78
13C2-PFTeDA	77
d3-MeFOSAA	56
d5-EtFOSAA	56
13C3-PFBS	88
13C3-PFHxS	83
13C8-PFOS	80

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

Client ID		VC-CS10-SS01-000H				
Battelle ID		J8671-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		1.26				
Matrix		SS				
Sample Size		1.94				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.03	U	0.34	1.03	5.15
PFHpA	375-85-9	1.03	U	0.45	1.03	5.15
PFOA	335-67-1	1.03	U	0.52	1.03	5.15
PFNA	375-95-1	1.03	U	0.44	1.03	5.15
PFDA	335-76-2	1.03	U	0.28	1.03	5.15
PFUnA	2058-94-8	1.03	U	0.42	1.03	5.15
PFDoA	307-55-1	0.52	U	0.25	0.52	5.15
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.15
PFTeDA	376-06-7	2.06	U	0.65	2.06	5.15
NMeFOSAA	2355-31-9	2.58	U	1.15	2.58	5.15
NEtFOSAA	2991-50-6	2.06	U	0.59	2.06	5.15
PFBS	375-73-5	1.03	U	0.37	1.03	5.15
PFHxS	355-46-4	0.52	U	0.23	0.52	5.15
PFOS	1763-23-1	1.09	J	0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	85
13C8-PFOA	87
13C9-PFNA	78
13C6-PFDA	88
13C7-PFUnA	94
13C2-PFDoA	86
13C2-PFTeDA	84
d3-MeFOSAA	59
d5-EtFOSAA	60
13C3-PFBS	84
13C3-PFHxS	81
13C8-PFOS	76

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

Client ID		VC-CS10-SB01-0102			
Battelle ID		J8672-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		2.51			
Matrix		SB			
Sample Size		1.94			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.03 U	0.34	1.03	5.15
PFHpA	375-85-9	1.03 U	0.45	1.03	5.15
PFOA	335-67-1	1.03 U	0.52	1.03	5.15
PFNA	375-95-1	1.03 U	0.44	1.03	5.15
PFDA	335-76-2	1.03 U	0.28	1.03	5.15
PFUnA	2058-94-8	1.03 U	0.42	1.03	5.15
PFDoA	307-55-1	0.52 U	0.25	0.52	5.15
PFTrDA	72629-94-8	1.03 U	0.29	1.03	5.15
PFTeDA	376-06-7	2.06 U	0.65	2.06	5.15
NMeFOSAA	2355-31-9	2.58 U	1.15	2.58	5.15
NEtFOSAA	2991-50-6	2.06 U	0.59	2.06	5.15
PFBS	375-73-5	1.03 U	0.37	1.03	5.15
PFHxS	355-46-4	0.52 U	0.23	0.52	5.15
PFOS	1763-23-1	1.03 U	0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	87
13C8-PFOA	90
13C9-PFNA	81
13C6-PFDA	87
13C7-PFUnA	87
13C2-PFDoA	86
13C2-PFTeDA	88
d3-MeFOSAA	67
d5-EtFOSAA	71
13C3-PFBS	99
13C3-PFHxS	94
13C8-PFOS	82

BATTELLE
It can be done

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

Client ID		VC-CS10-SB01-0506				
Battelle ID		J8673-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		20.04				
Matrix		SB				
Sample Size		1.57				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.27	U	0.42	1.27	6.37
PFHpA	375-85-9	1.27	U	0.56	1.27	6.37
PFOA	335-67-1	1.27	U	0.64	1.27	6.37
PFNA	375-95-1	1.27	U	0.55	1.27	6.37
PFDA	335-76-2	1.27	U	0.34	1.27	6.37
PFUnA	2058-94-8	1.27	U	0.52	1.27	6.37
PFDoA	307-55-1	0.64	U	0.31	0.64	6.37
PFTrDA	72629-94-8	1.27	U	0.36	1.27	6.37
PFTeDA	376-06-7	2.55	U	0.80	2.55	6.37
NMeFOSAA	2355-31-9	3.18	U	1.43	3.18	6.37
NEtFOSAA	2991-50-6	2.55	U	0.73	2.55	6.37
PFBS	375-73-5	1.27	U	0.46	1.27	6.37
PFHxS	355-46-4	0.64	U	0.28	0.64	6.37
PFOS	1763-23-1	1.27	U	0.34	1.27	6.37

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	91
13C8-PFOA	91
13C9-PFNA	83
13C6-PFDA	85
13C7-PFUnA	96
13C2-PFDoA	89
13C2-PFTeDA	90
d3-MeFOSAA	80
d5-EtFOSAA	88
13C3-PFBS	111
13C3-PFHxS	98
13C8-PFOS	85

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

Client ID		VC-CS10-SS02-000H			
Battelle ID		J8674-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.71			
Matrix		SS			
Sample Size		1.96			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.10
PFHpA	375-85-9	1.02 U	0.45	1.02	5.10
PFOA	335-67-1	1.02 U	0.51	1.02	5.10
PFNA	375-95-1	1.02 U	0.44	1.02	5.10
PFDA	335-76-2	1.02 U	0.28	1.02	5.10
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.10
PFDoA	307-55-1	0.51 U	0.24	0.51	5.10
PFTrDA	72629-94-8	1.02 U	0.29	1.02	5.10
PFTeDA	376-06-7	2.04 U	0.64	2.04	5.10
NMeFOSAA	2355-31-9	2.55 U	1.14	2.55	5.10
NEtFOSAA	2991-50-6	2.04 U	0.58	2.04	5.10
PFBS	375-73-5	1.02 U	0.37	1.02	5.10
PFHxS	355-46-4	0.51 U	0.22	0.51	5.10
PFOS	1763-23-1	1.41 J	0.28	1.02	5.10

Surrogate Recoveries (%)

13C5-PFHxA	80
13C4-PFHpA	82
13C8-PFOA	85
13C9-PFNA	71
13C6-PFDA	87
13C7-PFUnA	91
13C2-PFDoA	87
13C2-PFTeDA	97
d3-MeFOSAA	82
d5-EtFOSAA	76
13C3-PFBS	107
13C3-PFHxS	95
13C8-PFOS	88

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

Client ID		VC-CS10-SB02-0102			
Battelle ID		J8675-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.02			
Matrix		SB			
Sample Size		1.96			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.10
PFHpA	375-85-9	1.02 U	0.45	1.02	5.10
PFOA	335-67-1	1.02 U	0.51	1.02	5.10
PFNA	375-95-1	1.02 U	0.44	1.02	5.10
PFDA	335-76-2	1.02 U	0.28	1.02	5.10
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.10
PFDoA	307-55-1	0.51 U	0.24	0.51	5.10
PFTrDA	72629-94-8	1.02 U	0.29	1.02	5.10
PFTeDA	376-06-7	2.04 U	0.64	2.04	5.10
NMeFOSAA	2355-31-9	2.55 U	1.14	2.55	5.10
NEtFOSAA	2991-50-6	2.04 U	0.58	2.04	5.10
PFBS	375-73-5	1.02 U	0.37	1.02	5.10
PFHxS	355-46-4	0.51 U	0.22	0.51	5.10
PFOS	1763-23-1	1.02 U	0.28	1.02	5.10

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	88
13C8-PFOA	90
13C9-PFNA	74
13C6-PFDA	88
13C7-PFUnA	97
13C2-PFDoA	89
13C2-PFTeDA	97
d3-MeFOSAA	66
d5-EtFOSAA	62
13C3-PFBS	85
13C3-PFHxS	83
13C8-PFOS	83

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

Client ID		VC-CS10-SB02-0506			
Battelle ID		J8676-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.37			
Matrix		SB			
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	1.29 U	0.35	1.29	6.45

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	84
13C8-PFOA	92
13C9-PFNA	77
13C6-PFDA	90
13C7-PFUnA	93
13C2-PFDoA	86
13C2-PFTeDA	91
d3-MeFOSAA	60
d5-EtFOSAA	65
13C3-PFBS	79
13C3-PFHxS	90
13C8-PFOS	80

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_10/19/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/19/2018			
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	106
13C4-PFHpA	103
13C8-PFOA	104
13C9-PFNA	103
13C6-PFDA	99
13C7-PFUnA	101
13C2-PFDoA	102
13C2-PFTeDA	104
d3-MeFOSAA	61
d5-EtFOSAA	64
13C3-PFBS	88
13C3-PFHxS	86
13C8-PFOS	103

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

Client ID		KB80 IB			
Battelle ID		KB80 IB_10/22/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/22/2018			
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	113
13C4-PFHpA	110
13C8-PFOA	107
13C9-PFNA	101
13C6-PFDA	103
13C7-PFUnA	104
13C2-PFDoA	109
13C2-PFTeDA	123
d3-MeFOSAA	113
d5-EtFOSAA	98
13C3-PFBS	96
13C3-PFHxS	95
13C8-PFOS	97

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

Client ID		180507-02: Ottawa Sand				
Battelle ID		CR988PB-FS				
Sample Type		PB				
Collection Date		10/11/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		0.00				
Matrix		SEDIMENT				
Sample Size		2.09				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	0.96	U	0.32	0.96	4.78
PFHpA	375-85-9	0.96	U	0.42	0.96	4.78
PFOA	335-67-1	0.96	U	0.48	0.96	4.78
PFNA	375-95-1	0.96	U	0.41	0.96	4.78
PFDA	335-76-2	0.96	U	0.26	0.96	4.78
PFUnA	2058-94-8	0.96	U	0.39	0.96	4.78
PFDoA	307-55-1	0.48	U	0.23	0.48	4.78
PFTrDA	72629-94-8	0.96	U	0.27	0.96	4.78
PFTeDA	376-06-7	1.91	U	0.60	1.91	4.78
NMeFOSAA	2355-31-9	2.39	U	1.07	2.39	4.78
NEtFOSAA	2991-50-6	1.91	U	0.55	1.91	4.78
PFBS	375-73-5	0.96	U	0.34	0.96	4.78
PFHxS	355-46-4	0.48	U	0.21	0.48	4.78
PFOS	1763-23-1	0.96	U	0.26	0.96	4.78

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	92
13C8-PFOA	91
13C9-PFNA	78
13C6-PFDA	95
13C7-PFUnA	101
13C2-PFDoA	96
13C2-PFTeDA	100
d3-MeFOSAA	72
d5-EtFOSAA	77
13C3-PFBS	99
13C3-PFHxS	99
13C8-PFOS	97

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

Client ID		180507-02: Ottawa Sand					
Battelle ID		CR989LCS-FS					
Sample Type		LCS					
Collection Date		10/11/2018					
Extraction Date		10/11/2018					
Analysis Date		10/20/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		0.00					
Matrix		SEDIMENT					
Sample Size		2.10					
Size Unit-Basis		g				Control Limits	
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	10.50	9.62	109		45	135
PFHpA	375-85-9	10.41	9.52	109		60	128
PFOA	335-67-1	10.39	9.52	109		56	136
PFNA	375-95-1	11.10	9.52	117		54	130
PFDA	335-76-2	10.53	9.52	111		55	141
PFUnA	2058-94-8	9.67	9.52	102		57	137
PFDoA	307-55-1	10.83	9.52	114		62	134
PFTrDA	72629-94-8	10.42	9.52	109		51	127
PFTeDA	376-06-7	10.68	9.52	112		34	162
NMeFOSAA	2355-31-9	13.07	9.52	137		52	146
NEtFOSAA	2991-50-6	9.77	9.52	103		54	124
PFBS	375-73-5	9.67	9.62	101		57	145
PFHxS	355-46-4	10.39	9.62	108		52	132
PFOS	1763-23-1	10.03	9.52	105		50	130

Surrogate Recoveries (%)

13C5-PFHxA	85
13C4-PFHpA	78
13C8-PFOA	86
13C9-PFNA	79
13C6-PFDA	76
13C7-PFUnA	88
13C2-PFDoA	82
13C2-PFTeDA	88
d3-MeFOSAA	67
d5-EtFOSAA	83
13C3-PFBS	105
13C3-PFHxS	97
13C8-PFOS	91

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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

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

SB, SS

Batch 18-0610

Package DP-18-0306

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

SB, SS

Batch 18-0610

Package DP-18-0306

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 2018.10.24 14:11:07 -04'00'

QC Chemist Approval: Digitally signed by devinec@battelle.org DN: cn=devinec@battelle.org Date: 2018.10.30 13:43:54 -04'00'

Project Manager Approval: Digitally signed by Jonathan Thorn Date: 2018.10.31 10:42:05 -04'00'

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

SB, SS

Batch 18-0610

Package DP-18-0306

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.	31
3	***Miscellaneous Documentation*** Case Narrative, Miscellaneous Documentation Form, Quality Control Summary, Example Calculations, Internal Standard Recovery Report, Retention Time Window Report.	53
4	***Sample Preparation Records*** Sample Preparation Records, Dilution Worksheets, Standard Preparation Records, Certificates Of Analysis, GPC Check Report.	200
5	***Analytical Calibrations*** Analytical Sequence, Analytical Method, Tune Report, Initial Calibration, Pesticide Degradation Report, RF Summary, Calibration Verifications, Independent Calibration Verification Check.	223
6	***Analytical Data*** Raw Data Quantification Reports.	353
7	***Chromatograms*** Sample And Standard Chromatograms.	454
8	***Unused Data***	625

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Signature Page

Name (Printed)	Signature	Initials	Date
Jonathan Thorn		JRT	4/4/2018
Robert Lizotte, Jr.		BL	4.4.2018
FRANCO PALA			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: 18-0610
Project/Site: Naval Base Ventura County
CTO: 4164

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CR988PB-FS	180507-02: Ottawa Sand	SEDIMENT	10/11/2018	10/11/2018
CR989LCS-FS	180507-02: Ottawa Sand	SEDIMENT	10/11/2018	10/11/2018
J8658-FS	VC-CS12-SS01-000H	SS	10/6/2018	10/9/2018
J8659-FS	VC-CS12-SB01-0102	SB	10/6/2018	10/9/2018
J8660-FS	VC-CS12-SB01-0506	SB	10/6/2018	10/9/2018
J8661-FS	VC-CS12-SS02-000H	SS	10/6/2018	10/9/2018
J8662-FS	VC-CS12-SB02-0102	SB	10/6/2018	10/9/2018
J8663-FS	VC-CS12-SB02-0506	SB	10/6/2018	10/9/2018
J8664-FS	VC-CS12-SS03-000H	SS	10/6/2018	10/9/2018
J8665-FS	VC-CS12-SB03-0102	SB	10/6/2018	10/9/2018
J8666-FS	VC-CS12-SB03-0506	SB	10/6/2018	10/9/2018
J8671-FS	VC-CS10-SS01-000H	SS	10/6/2018	10/9/2018
J8672-FS	VC-CS10-SB01-0102	SB	10/6/2018	10/9/2018
J8673-FS	VC-CS10-SB01-0506	SB	10/6/2018	10/9/2018
J8674-FS	VC-CS10-SS02-000H	SS	10/6/2018	10/9/2018
J8675-FS	VC-CS10-SB02-0102	SB	10/6/2018	10/9/2018
J8676-FS	VC-CS10-SB02-0506	SB	10/6/2018	10/9/2018

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*

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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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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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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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WORK/QUALITY ASSURANCE PROJECT PLAN

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)			

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name:	Master_369
SOP Reference:	5-369 - Analysis of Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS)
Description:	PFAS by DoD QSM 5.1 Table B-15
Matrix:	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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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name: Master_369

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

Total Analytes: 27

Subtract Peaks:

None

Sum Peaks:

None

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 2: Test Codes

Project Test Code Name: Master_369

ICAL Acceptance Criteria:

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

Continuing Calibration Verification Criteria:

CCV Name: 5-369

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

Independent Calibration Verification:

ICC Name: 5-369

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

Mass Discrimination Criteria:

None

Degredation Check Criteria:

None

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 3: Method Quality Objectives

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

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 3: Method Quality Objectives

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

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ShpNo SHP-181009-01

Battelle Project No:0110125-01

Sample Receipt Form

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Tuesday, October 09, 2018 10:15 AM

No. of Shipping Containers: 3

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 3	Cooler	7831 4550 2170	Custody Seals	Intact	Intact	Therm_1	0.9	14
2 of 3	Cooler	7831 4550 2180	Custody Seals	Intact	Intact	Therm_1	1.1	39
3 of 3	Cooler	7831 4550 2191	Custody Seals	Intact	Intact	Therm_1	1.7	12

Samples

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

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

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

Temperature upon receipt (°C): 1.7 Temperature Blank used ☑ Yes ☐ No
(Note: If temperature upon receipt differs from required conditions, see sample log comment field)

Samples Acidified: ☐ Yes ☐ No ☑ Unknown

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

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

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

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

Storage Location: Custody: Refrigerator - R0119 (NA) **BDO IDs Assigned:** J8658 - J8722

Samples logged in by: Schumitz, Matt **Date/Time:** 10/09/2018 10:15 AM

Approved By: **Approved On:**

Authorized By: **Authorized On:**

BATTELLE
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ShpNo SHP-181009-01

Battelle Project No:)110125-01

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Tuesday, October 09, 2018 10:15 AM

No. of Shipping Containers: 3

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8658	VC-CS12-SS01-000H	10/06/18 8:25	10/09/18 14:33	1	SS	1.7	NA	NA	NA	R0119 (NA)			
J8659	VC-CS12-SB01-0102	10/06/18 8:26	10/09/18 14:33	1	SB	1.7	NA	NA	NA	R0119 (NA)			
J8660	VC-CS12-SB01-0506	10/06/18 8:34	10/09/18 14:34	1	SB	1.7	NA	NA	NA	R0119 (NA)			
J8661	VC-CS12-SS02-000H	10/06/18 11:07	10/09/18 14:34	1	SS	1.7	NA	NA	NA	R0119 (NA)			
J8662	VC-CS12-SB02-0102	10/06/18 11:09	10/09/18 14:34	1	SB	1.7	NA	NA	NA	R0119 (NA)			
J8663	VC-CS12-SB02-0506	10/06/18 11:13	10/09/18 14:35	1	SB	1.7	NA	NA	NA	R0119 (NA)			
J8664	VC-CS12-SS03-000H	10/06/18 10:06	10/09/18 14:35	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8665	VC-CS12-SB03-0102	10/06/18 10:07	10/09/18 14:35	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8666	VC-CS12-SB03-0506	10/06/18 10:12	10/09/18 14:36	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8667	VC-CS12-DW01-1018	10/06/18 8:44	10/09/18 14:36	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8668	VC-CS12-DW01P-1018	10/06/18 8:48	10/09/18 14:37	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8669	VC-CS12-DW02-1018	10/06/18 11:22	10/09/18 14:37	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8670	VC-CS12-DW03-1018	10/06/18 10:30	10/09/18 14:38	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8671	VC-CS10-SS01-000H	10/06/18 13:02	10/09/18 14:39	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8672	VC-CS10-SB01-0102	10/06/18 13:04	10/09/18 14:40	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8673	VC-CS10-SB01-0506	10/06/18 13:10	10/09/18 14:41	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8674	VC-CS10-SS02-000H	10/06/18 9:55	10/09/18 14:41	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8675	VC-CS10-SB02-0102	10/06/18 9:58	10/09/18 14:41	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8676	VC-CS10-SB02-0506	10/06/18 10:06	10/09/18 14:42	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8677	VC-CS10-SS03-000H	10/06/18 11:31	10/09/18 14:43	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8678	VC-CS10-SB03-0102	10/06/18 11:33	10/09/18 14:43	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8679	VC-CS10-SB03-0506	10/06/18 11:37	10/09/18 14:43	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8680	VC-CS10-SS04-000H	10/06/18 10:35	10/09/18 14:43	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8681	VC-CS10-SB04-0102	10/06/18 10:38	10/09/18 14:44	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8682	VC-CS10-SB04-0506	10/06/18 10:41	10/09/18 14:44	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8683	VC-CS10-DW01-1018	10/06/18 13:38	10/09/18 14:45	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8684	VC-CS10-DW02-1018	10/06/18 10:30	10/09/18 14:46	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8685	VC-CS10-DW02P-1018	10/06/18 10:40	10/09/18 14:46	2	GW	0.9	NA	NA	NA	R0119 (NA)			

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ShpNo SHP-181009-01

Battelle Project No:)110125-01

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Tuesday, October 09, 2018 10:15 AM

No. of Shipping Containers: 3

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8686	VC-CS10-DW03-1018	10/06/18 12:07	10/09/18 14:46	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8687	VC-CS10-DW04-1018	10/06/18 10:55	10/09/18 14:46	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8688	VC-CS18-DW01-1018	10/06/18 15:18	10/09/18 14:47	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8689	VC-CS10-SD01-000H	10/06/18 13:28	10/09/18 14:48	1	SD	0.9	NA	NA	NA	R0119 (NA)			
J8690	VC-CS10-SD01-0102	10/06/18 13:30	10/09/18 14:48	1	SD	0.9	NA	NA	NA	R0119 (NA)			
J8691	VC-CS18-SS01-000H	10/06/18 13:52	10/09/18 14:49	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8692	VC-CS18-SB01-0102	10/06/18 13:54	10/09/18 14:49	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8693	VC-CS18-SB01-0506	10/06/18 14:00	10/09/18 14:50	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8694	VC-CS00-SS01-000H	10/06/18 14:05	10/09/18 14:52	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8695	VC-CS00-SB01-0102	10/06/18 14:07	10/09/18 14:53	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8696	VC-CS00-SB01-0506	10/06/18 14:10	10/09/18 14:58	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8697	VC-CS00-SS02-000H	10/06/18 15:22	10/09/18 14:59	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8698	VC-CS00-SB02-0102	10/06/18 15:23	10/09/18 14:59	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8699	VC-CS00-SB02-0506	10/06/18 15:27	10/09/18 15:00	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8700	VC-CS00-SS03-000H	10/06/18 16:15	10/09/18 15:00	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8701	VC-CS00-SB03-0102	10/06/18 16:18	10/09/18 15:06	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8702	VC-CS00-SB03-0506	10/06/18 16:25	10/09/18 15:07	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8703	VC-CS00-SS04-000H	10/06/18 13:13	10/09/18 15:07	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8704	VC-CS00-SB04-0102	10/06/18 13:15	10/09/18 15:07	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8705	VC-CS00-SB04-0506	10/06/18 13:20	10/09/18 15:07	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8706	VC-CS00-SS05-000H	10/06/18 17:17	10/09/18 15:08	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8707	VC-CS00-SB05-0102	10/06/18 17:19	10/09/18 15:09	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8708	VC-CS00-SB05-0506	10/06/18 17:24	10/09/18 15:09	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8709	VC-CS00-SS06-000H	10/06/18 17:05	10/09/18 15:09	1	SS	1.1	NA	NA	NA	R0119 (NA)			
J8710	VC-CS00-SB06-0102	10/06/18 17:07	10/09/18 15:10	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8711	VC-CS00-SB06-0506	10/06/18 17:10	10/09/18 15:10	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8712	VC-CS00-SB06-0506-MS	10/06/18 17:10	10/09/18 15:10	1	SB	1.1	NA	NA	NA	R0119 (NA)			
J8713	VC-CS00-SB06-0506-MSD	10/06/18 17:10	10/09/18 15:11	1	SB	1.1	NA	NA	NA	R0119 (NA)			

BATTELLE
It can be done

ShpNo SHP-181009-01

Battelle Project No:)110125-01

Sample Receipt Form Details

Approved: ☐ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Tuesday, October 09, 2018 10:15 AM

No. of Shipping Containers: 3

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8714	VC-FB11-10062018	10/06/18 18:34	10/09/18 15:11	2	AQ	0.9	NA	NA	NA	R0119 (NA)			
J8715	VC-EB11-10062018	10/06/18 18:36	10/09/18 15:11	2	AQ	0.9	NA	NA	NA	R0119 (NA)			
J8716	VC-CS00-DW01-1018	10/06/18 14:32	10/09/18 15:12	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8717	VC-CS00-DW02-1018	10/06/18 16:25	10/09/18 15:12	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8718	VC-CS00-DW02P-1018	10/06/18 16:27	10/09/18 15:14	2	GW	0.9	NA	NA	NA	R0119 (NA)			
J8719	VC-CS00-DW03-1018	10/06/18 17:05	10/09/18 15:14	2	GW	1.1	NA	NA	NA	R0119 (NA)			
J8720	VC-CS00-DW04-1018	10/06/18 13:30	10/09/18 15:15	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8721	VC-CS00-DW05-1018	10/06/18 18:02	10/09/18 15:15	2	GW	1.7	NA	NA	NA	R0119 (NA)			
J8722	VC-CS00-DW06-1018	10/06/18 17:40	10/09/18 15:15	2	GW	1.7	NA	NA	NA	R0119 (NA)			

Total Samples: 65

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM CS12	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 # 06
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.	PFAS by Method 537 Mod	
VC-CS12-SS01-000H	10/6/18	0825	Grab	SS	1	X	J8658
VC-CS12-SB01-0102	10/6/18	0826	Grab	SB	1	X	59
VC-CS12-SB01-0506	10/6/18	0834	Grab	SB	1	X	60
VC-CS12-SS02-000H	10/6/18	1107	Grab	SS	1	X	61
VC-CS12-SB02-0102	10/6/18	1109	Grab	SB	1	X	62
VC-CS12-SB02-0506	10/6/18	1113	Grab	SB	1	X	63
VC-CS12-SS03-000H	10/6/18	1006	Grab	SS	1	X	64
VC-CS12-SB03-0102	10/6/18	1007	Grab	SB	1	X	65
VC-CS12-SB03-0506	10/6/18	1012	Grab	SB	1	X	J8666
~~VC-CS12-SB03-~~			Grab	SB	1	X	
~~VC-CS12-S-MS~~			Grab			X	
~~VC-CS12-S-SD~~			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	Jacobs	10/8/18 0800		Battelle	10-9-18 1015
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 CS12	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 # 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 2 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
VC-CS12-DW01-1018	10/6/18	0844	Grab	GW	2	X	J8667
VC-CS12-DW01P-1018	10/6/18	0848	Grab	GW	2	X	J8668
VC-CS12-DW02-1018	10/6/18	1122	Grab	GW	2	X	J8669
VC-CS12-DW03-1018	10/6/18	1030	Grab	GW	2	X	J8670
~~FDT-AQ-FB-~~			~~Grab~~	~~AQ~~		~~X~~	
~~FDT-AQ-EB-~~			~~Grab~~	~~AQ~~		~~X~~	

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	10/8/18 0800		Battelle	10-9-18 1015
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 CS10 ~~CS15~~	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): J. Kilbert Phone: 724-977-3628 Email: victoria.kilbert@jacobs.com Turnaround Time (TAT) Requested:	Preservative: NA	COC #: 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page#: 3 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
VC-CS10-SS01-000H	10/6/18	1302	Grab	SS	1	X	J8671
VC-CS10-SB01-0102	10/6/18	1304	Grab	SB	1	X	72
VC-CS10-SB01-0506	10/6/18	1310	Grab	SB	1	X	73
VC-CS10-SS02-000H	10/6/18	0955	Grab	SS	1	X	74
VC-CS10-SB02-0102	10/6/18	0958	Grab	SB	1	X	75
VC-CS10-SB02-0506	10/6/18	1006	Grab	SB	1	X	76
VC-CS10-SS03-000H	10/6/18	1131	Grab	SS	1	X	77
VC-CS10-SB03-0102	10/6/18	1133	Grab	SB	1	X	78
VC-CS10-SB03-0506	10/6/18	1137	Grab	SB	1	X	79
VC-CS10-SS04-000H	10/6/18	1035	Grab	SS	1	X	80
VC-CS10-SB04-0102	10/6/18	1038	Grab	SB	1	X	81
VC-CS10-SB04-0506	10/6/18	1041	Grab	SB	1	X	J8682

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	10/8/18 0800		Battelle	10-9-18 1015
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 CS10 & CS18	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 # 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 4 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod	
VC-CS10-DW01-1018	10/6/18	1338	Grab	GW	2	X	J8683
VC-CS10-DW02-1018	10/6/18	1030	Grab	GW	2	X	J8684
VC-CS10-DW02P-1018	10/6/18	1040	Grab	GW	2	X	J8685
VC-CS10-DW03-1018	10/6/18	1207	Grab	GW	2	X	J8686
VC-CS10-DW04-1018	10/6/18	1055	Grab	GW	2	X	J8687
~~FDT-AQ-FB~~			~~Grab~~	~~AQ~~		X	
~~FDT-AQ-EB~~			~~Grab~~	~~AQ~~		X	
VC-CS18-DW01-1018	10/6/18	1518	Grab	GW	2	X	J8688

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	10/8/18 0808		Battelle	10-9-18 1015
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:	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:	PM CS10 & CS18	COC # 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST		Page# 5 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod	
VC-CS10-SD01-000H	10/6/18	1328	Grab	SD	1		X	J8689
VC-CS10-SD01-0102	10/6/18	1330	Grab	SD	1		X	J8690
~~VC-CS10-S-MS~~			~~Grab~~				~~X~~	
~~VC-CS10-S-SD~~			~~Grab~~				~~X~~	
~~FDT-SO-EB~~			~~Grab~~	~~AQ~~			~~X~~	
~~FDT-SO-EB~~			~~Grab~~	~~AQ~~			~~X~~	
VC-CS18-SS01-000H	10/6/18	1352	Grab	SS	1		X	J8691
VC-CS18-SB01-0102	10/6/18	1354	Grab	SB	1		X	J8692
VC-CS18-SB01-0506	10/6/18	1400	Grab	SB	1		X	J8693

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:
Victoria Kilbert	Jacobs	10/8/18 0800		Battelle	10-9-18 1015
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 CS00	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 #: 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X 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.		
VC-CS00-SS01-000H	10/6/18	1405	Grab	SS	1	X	J8694
VC-CS00-SB01-0102	10/6/18	1407	Grab	SB	1	X	95
VC-CS00-SB01-0506	10/6/18	1410	Grab	SB	1	X	96
VC-CS00-SS02-000H	10/6/18	1522	Grab	SS	1	X	97
VC-CS00-SB02-0102	10/6/18	1523	Grab	SB	1	X	98
VC-CS00-SB02-0506	10/6/18	1527	Grab	SB	1	X	99
VC-CS00-SS03-000H	10/6/18	1615	Grab	SS	1	X	J8700
VC-CS00-SB03-0102	10/6/18	1618	Grab	SB	1	X	01
VC-CS00-SB03-0506	10/6/18	1625	Grab	SB	1	X	02
VC-CS00-SS04-000H	10/6/18	1313	Grab	SS	1	X	03
VC-CS00-SB04-0102	10/6/18	1315	Grab	SB	1	X	04
VC-CS00-SB04-0506	10/6/18	1320	Grab	SB	1	X	J8705

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	10/8/18 0800		Battelle	10-9-18 1015
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 CS00	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 #: 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal ☒ 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.		
VC-CS00-SS05-000H	10/6/18	1717	Grab	SS	1	X	J8706
VC-CS00-SB05-0102	10/6/18	1719	Grab	SB	1	X	07
VC-CS00-SB05-0506	10/6/18	1724	Grab	SB	1	X	08
VC-CS00-SS06-000H	10/6/18	1705	Grab	SS	1	X	09
VC-CS00-SB06-0102	10/6/18	1707	Grab	SB	1	X	10
VC-CS00-SB06-0506	10/6/18	1710	Grab	SB	1	X	11
VC-~~CS94-S~~ CS00-SB06-0506-MS	10/6/18	1710	Grab	SB	1	X	MS 12
VC-~~CS94-S~~ CS00-SB06-0506-MSD	10/6/18	1710	Grab	SB	1	X	MSD 13
VC-~~FDT~~SO-FB11-10062018	10/6/18	1834	Grab	AQ	2	X	14
VC-~~FDT~~SO-EB11-10062018	10/6/18	1836	Grab	AQ	2	X	on bowl J8715
							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	10/8/18 0850		Battelle	10-9-18 1015
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 CS00	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 # 06
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 8 of 8

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis	
VC-CS00-DW01-1018	10/6/18	1432	Grab	GW	2	X	J8716
VC-CS00-DW02-1018	10/6/18	1625	Grab	GW	2	X	J8717
VC-CS00-DW02P-1018	10/6/18	1627	Grab	GW	2	X	J8718
VC-CS00-DW03-1018	10/6/18	1705	Grab	GW	2	X	(1) ~~J78~~ J8719
VC-CS00-DW04-1018	10/6/18	1330	Grab	GW	2	X	J8720
VC-CS00-DW05-1018	10/6/18	1802	Grab	GW	2	X	J8721
VC-CS00-DW06-1018	10/6/18	1740	Grab	GW	2	X	J8722
~~EDT-AQ-FB~~			Grab	AQ		X	
~~EDT-AQ-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	10/8/18 0800		Battelle	10-9-18 1015
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:

(1) MDS Wrong Number 10-9-18

(724) 977-3628
ERT
Y STE 1450
92101
US
SHIP DATE: 080CT18
ACTWGT: 53.90 LB
CAD: 6997666/SSF01922
DIMS: 26x13x14 IN
BILL THIRD PARTY
AN THORN
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IGWATER DR. STE 202
LL MA 02061
REF:
DEPT:
0.9° TB
10-9-18 Therm
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REL#
37853
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4550 2170
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XPUA
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PRIORITY OVERNIG
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MA-US B

IGIN ID:OXRA (724) 977-3628
ICTORIA KILBERT
PO 695803
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US
SHIP DATE: 080CT18
ACTWGT: 66.50 LB
CAD: 6997666/SSF01922
DIMS: 26x14x14 IN
BILL THIRD PARTY
TO JONATHAN THORN
BATTELLE
141 LONGWATER DR. STE 202
NORWELL MA 02061
(781) 681-5666
INV:
PO:
REF:
DEPT:
1.1° TB
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2 of 3
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PRIORITY OVERNIGHT
NB XPUA
02061
MA-US BOS
RT 246 1
ST 4.3 10:30 B
2180
10.09

ORIGIN ID:OXRA (724) 977-3628
VICTORIA KILBERT
PO 695803
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US
SHIP DATE: 080CT1
ACTWGT: 51.60 LB
CAD: 6997666/SSFO
DIMS: 23x15x16 IN
BILL THIRD PARTY
TO JONATHAN THORN
BATTELLE
141 LONGWATER DR. STE 202
NORWELL MA 02061
(781) 681-5666
INV:
PO:
REF:
DEPT:
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REL#
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3 of 3
MPS# 0263 7831 4550 2191
Mstr# 7831 4550 2170
0201
TUE – 09 OCT 10:
PRIORITY OVERNIG
NB XPUA
020
MA-US BO
RT 246 1
ST 4.3 10:30 B
2191
10.09

RT 246 1
10:30 B

Data Tables

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

Client ID		VC-CS12-SS01-000H			
Battelle ID		J8658-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.99			
Matrix		SS			
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	0.30 J	0.22	0.50	5.00
PFOS	1763-23-1	2.21 J	0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	79
13C8-PFOA	86
13C9-PFNA	68
13C6-PFDA	82
13C7-PFUnA	84
13C2-PFDoA	84
13C2-PFTeDA	81
d3-MeFOSAA	68
d5-EtFOSAA	69
13C3-PFBS	97
13C3-PFHxS	95
13C8-PFOS	91

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

Client ID		VC-CS12-SB01-0102				
Battelle ID		J8659-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		5.62				
Matrix		SB				
Sample Size		1.86				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	0.48	J	0.35	1.08	5.38
PFHpA	375-85-9	1.08	U	0.47	1.08	5.38
PFOA	335-67-1	1.65	J	0.54	1.08	5.38
PFNA	375-95-1	1.08	U	0.46	1.08	5.38
PFDA	335-76-2	1.08	U	0.29	1.08	5.38
PFUnA	2058-94-8	1.08	U	0.44	1.08	5.38
PFDoA	307-55-1	0.54	U	0.26	0.54	5.38
PFTrDA	72629-94-8	1.08	U	0.30	1.08	5.38
PFTeDA	376-06-7	2.15	U	0.68	2.15	5.38
NMeFOSAA	2355-31-9	2.69	U	1.20	2.69	5.38
NEtFOSAA	2991-50-6	2.15	U	0.61	2.15	5.38
PFBS	375-73-5	1.08	U	0.39	1.08	5.38
PFHxS	355-46-4	2.41	J	0.24	0.54	5.38
PFOS	1763-23-1	1.45	J	0.29	1.08	5.38

Surrogate Recoveries (%)

13C5-PFHxA	79
13C4-PFHpA	87
13C8-PFOA	87
13C9-PFNA	73
13C6-PFDA	89
13C7-PFUnA	94
13C2-PFDoA	82
13C2-PFTeDA	90
d3-MeFOSAA	52
d5-EtFOSAA	51
13C3-PFBS	93
13C3-PFHxS	80
13C8-PFOS	83

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

Client ID		VC-CS12-SB01-0506			
Battelle ID		J8660-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		25.42			
Matrix		SB			
Sample Size		1.66			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.20 U	0.40	1.20	6.02
PFHpA	375-85-9	1.20 U	0.53	1.20	6.02
PFOA	335-67-1	1.20 U	0.60	1.20	6.02
PFNA	375-95-1	1.20 U	0.52	1.20	6.02
PFDA	335-76-2	1.20 U	0.33	1.20	6.02
PFUnA	2058-94-8	1.20 U	0.49	1.20	6.02
PFDoA	307-55-1	0.60 U	0.29	0.60	6.02
PFTrDA	72629-94-8	1.20 U	0.34	1.20	6.02
PFTeDA	376-06-7	2.41 U	0.76	2.41	6.02
NMeFOSAA	2355-31-9	3.01 U	1.35	3.01	6.02
NEtFOSAA	2991-50-6	2.41 U	0.69	2.41	6.02
PFBS	375-73-5	1.20 U	0.43	1.20	6.02
PFHxS	355-46-4	0.60 U	0.27	0.60	6.02
PFOS	1763-23-1	1.20 U	0.33	1.20	6.02

Surrogate Recoveries (%)

13C5-PFHxA	76
13C4-PFHpA	82
13C8-PFOA	82
13C9-PFNA	67
13C6-PFDA	74
13C7-PFUnA	72
13C2-PFDoA	74
13C2-PFTeDA	76
d3-MeFOSAA	54
d5-EtFOSAA	55
13C3-PFBS	81
13C3-PFHxS	74
13C8-PFOS	75

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

Client ID		VC-CS12-SS02-000H			
Battelle ID		J8661-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.56			
Matrix		SS			
Sample Size		1.98			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.61 J	0.33	1.01	5.05
PFHpA	375-85-9	0.46 J	0.44	1.01	5.05
PFOA	335-67-1	1.01 U	0.51	1.01	5.05
PFNA	375-95-1	1.01 U	0.43	1.01	5.05
PFDA	335-76-2	1.01 U	0.27	1.01	5.05
PFUnA	2058-94-8	1.01 U	0.41	1.01	5.05
PFDoA	307-55-1	0.51 U	0.24	0.51	5.05
PFTrDA	72629-94-8	1.01 U	0.28	1.01	5.05
PFTeDA	376-06-7	2.02 U	0.64	2.02	5.05
NMeFOSAA	2355-31-9	2.53 U	1.13	2.53	5.05
NEtFOSAA	2991-50-6	2.02 U	0.58	2.02	5.05
PFBS	375-73-5	0.45 J	0.36	1.01	5.05
PFHxS	355-46-4	2.07 J	0.22	0.51	5.05
PFOS	1763-23-1	1.98 J	0.27	1.01	5.05

Surrogate Recoveries (%)

13C5-PFHxA	85
13C4-PFHpA	86
13C8-PFOA	94
13C9-PFNA	75
13C6-PFDA	90
13C7-PFUnA	91
13C2-PFDoA	90
13C2-PFTeDA	92
d3-MeFOSAA	59
d5-EtFOSAA	62
13C3-PFBS	97
13C3-PFHxS	86
13C8-PFOS	81

BATTELLE
It can be done

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

Client ID		VC-CS12-SB02-0102				
Battelle ID		J8662-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		7.95				
Matrix		SB				
Sample Size		1.87				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	0.95	J	0.35	1.07	5.35
PFHpA	375-85-9	0.91	J	0.47	1.07	5.35
PFOA	335-67-1	3.78	J	0.53	1.07	5.35
PFNA	375-95-1	1.07	U	0.46	1.07	5.35
PFDA	335-76-2	1.07	U	0.29	1.07	5.35
PFUnA	2058-94-8	1.07	U	0.44	1.07	5.35
PFDoA	307-55-1	0.53	U	0.26	0.53	5.35
PFTrDA	72629-94-8	1.07	U	0.30	1.07	5.35
PFTeDA	376-06-7	2.14	U	0.67	2.14	5.35
NMeFOSAA	2355-31-9	2.67	U	1.20	2.67	5.35
NEtFOSAA	2991-50-6	2.14	U	0.61	2.14	5.35
PFBS	375-73-5	1.07	U	0.39	1.07	5.35
PFHxS	355-46-4	7.01		0.24	0.53	5.35
PFOS	1763-23-1	1.78	J	0.29	1.07	5.35

Surrogate Recoveries (%)

13C5-PFHxA	78
13C4-PFHpA	81
13C8-PFOA	87
13C9-PFNA	74
13C6-PFDA	82
13C7-PFUnA	87
13C2-PFDoA	84
13C2-PFTeDA	85
d3-MeFOSAA	69
d5-EtFOSAA	70
13C3-PFBS	107
13C3-PFHxS	92
13C8-PFOS	95

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

Client ID		VC-CS12-SB02-0506			
Battelle ID		J8663-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		33.66			
Matrix		SB			
Sample Size		1.36			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.56 J	0.49	1.47	7.35
PFHpA	375-85-9	1.47 U	0.65	1.47	7.35
PFOA	335-67-1	1.31 J	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	0.86 J	0.32	0.74	7.35
PFOS	1763-23-1	1.47 U	0.40	1.47	7.35

Surrogate Recoveries (%)

13C5-PFHxA	79
13C4-PFHpA	85
13C8-PFOA	87
13C9-PFNA	72
13C6-PFDA	89
13C7-PFUnA	96
13C2-PFDoA	84
13C2-PFTeDA	97
d3-MeFOSAA	58
d5-EtFOSAA	59
13C3-PFBS	84
13C3-PFHxS	82
13C8-PFOS	73

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

Client ID		VC-CS12-SS03-000H				
Battelle ID		J8664-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		2.18				
Matrix		SS				
Sample Size		1.92				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.04	U	0.34	1.04	5.21
PFHpA	375-85-9	1.04	U	0.46	1.04	5.21
PFOA	335-67-1	1.04	U	0.52	1.04	5.21
PFNA	375-95-1	1.04	U	0.45	1.04	5.21
PFDA	335-76-2	1.04	U	0.28	1.04	5.21
PFUnA	2058-94-8	1.04	U	0.43	1.04	5.21
PFDoA	307-55-1	0.52	U	0.25	0.52	5.21
PFTrDA	72629-94-8	1.04	U	0.29	1.04	5.21
PFTeDA	376-06-7	2.08	U	0.66	2.08	5.21
NMeFOSAA	2355-31-9	2.60	U	1.17	2.60	5.21
NEtFOSAA	2991-50-6	2.08	U	0.59	2.08	5.21
PFBS	375-73-5	1.04	U	0.38	1.04	5.21
PFHxS	355-46-4	0.28	J	0.23	0.52	5.21
PFOS	1763-23-1	3.08	J	0.28	1.04	5.21

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	92
13C8-PFOA	92
13C9-PFNA	77
13C6-PFDA	85
13C7-PFUnA	90
13C2-PFDoA	85
13C2-PFTeDA	89
d3-MeFOSAA	66
d5-EtFOSAA	63
13C3-PFBS	86
13C3-PFHxS	87
13C8-PFOS	84

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

Client ID		VC-CS12-SB03-0102				
Battelle ID		J8665-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/22/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		7.16				
Matrix		SB				
Sample Size		1.88				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.06	U	0.35	1.06	5.32
PFHpA	375-85-9	1.06	U	0.47	1.06	5.32
PFOA	335-67-1	1.06	U	0.53	1.06	5.32
PFNA	375-95-1	1.06	U	0.46	1.06	5.32
PFDA	335-76-2	1.06	U	0.29	1.06	5.32
PFUnA	2058-94-8	1.06	U	0.44	1.06	5.32
PFDoA	307-55-1	0.53	U	0.26	0.53	5.32
PFTrDA	72629-94-8	1.06	U	0.30	1.06	5.32
PFTeDA	376-06-7	2.13	U	0.67	2.13	5.32
NMeFOSAA	2355-31-9	2.66	U	1.19	2.66	5.32
NEtFOSAA	2991-50-6	2.13	U	0.61	2.13	5.32
PFBS	375-73-5	1.06	U	0.38	1.06	5.32
PFHxS	355-46-4	0.89	J	0.23	0.53	5.32
PFOS	1763-23-1	1.04	J	0.29	1.06	5.32

Surrogate Recoveries (%)

13C5-PFHxA	86
13C4-PFHpA	87
13C8-PFOA	86
13C9-PFNA	86
13C6-PFDA	86
13C7-PFUnA	92
13C2-PFDoA	95
13C2-PFTeDA	98
d3-MeFOSAA	70
d5-EtFOSAA	68
13C3-PFBS	95
13C3-PFHxS	92
13C8-PFOS	101

BATTELLE
It can be done

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

Client ID		VC-CS12-SB03-0506				
Battelle ID		J8666-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		37.44				
Matrix		SB				
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	1.56	U	0.42	1.56	7.81

Surrogate Recoveries (%)

13C5-PFHxA	73
13C4-PFHpA	80
13C8-PFOA	85
13C9-PFNA	67
13C6-PFDA	77
13C7-PFUnA	84
13C2-PFDoA	78
13C2-PFTeDA	77
d3-MeFOSAA	56
d5-EtFOSAA	56
13C3-PFBS	88
13C3-PFHxS	83
13C8-PFOS	80

BATTELLE
It can be done

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

Client ID		VC-CS10-SS01-000H				
Battelle ID		J8671-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		1.26				
Matrix		SS				
Sample Size		1.94				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.03	U	0.34	1.03	5.15
PFHpA	375-85-9	1.03	U	0.45	1.03	5.15
PFOA	335-67-1	1.03	U	0.52	1.03	5.15
PFNA	375-95-1	1.03	U	0.44	1.03	5.15
PFDA	335-76-2	1.03	U	0.28	1.03	5.15
PFUnA	2058-94-8	1.03	U	0.42	1.03	5.15
PFDoA	307-55-1	0.52	U	0.25	0.52	5.15
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.15
PFTeDA	376-06-7	2.06	U	0.65	2.06	5.15
NMeFOSAA	2355-31-9	2.58	U	1.15	2.58	5.15
NEtFOSAA	2991-50-6	2.06	U	0.59	2.06	5.15
PFBS	375-73-5	1.03	U	0.37	1.03	5.15
PFHxS	355-46-4	0.52	U	0.23	0.52	5.15
PFOS	1763-23-1	1.09	J	0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	85
13C8-PFOA	87
13C9-PFNA	78
13C6-PFDA	88
13C7-PFUnA	94
13C2-PFDoA	86
13C2-PFTeDA	84
d3-MeFOSAA	59
d5-EtFOSAA	60
13C3-PFBS	84
13C3-PFHxS	81
13C8-PFOS	76

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

Client ID		VC-CS10-SB01-0102			
Battelle ID		J8672-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		2.51			
Matrix		SB			
Sample Size		1.94			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.03 U	0.34	1.03	5.15
PFHpA	375-85-9	1.03 U	0.45	1.03	5.15
PFOA	335-67-1	1.03 U	0.52	1.03	5.15
PFNA	375-95-1	1.03 U	0.44	1.03	5.15
PFDA	335-76-2	1.03 U	0.28	1.03	5.15
PFUnA	2058-94-8	1.03 U	0.42	1.03	5.15
PFDoA	307-55-1	0.52 U	0.25	0.52	5.15
PFTrDA	72629-94-8	1.03 U	0.29	1.03	5.15
PFTeDA	376-06-7	2.06 U	0.65	2.06	5.15
NMeFOSAA	2355-31-9	2.58 U	1.15	2.58	5.15
NEtFOSAA	2991-50-6	2.06 U	0.59	2.06	5.15
PFBS	375-73-5	1.03 U	0.37	1.03	5.15
PFHxS	355-46-4	0.52 U	0.23	0.52	5.15
PFOS	1763-23-1	1.03 U	0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	87
13C8-PFOA	90
13C9-PFNA	81
13C6-PFDA	87
13C7-PFUnA	87
13C2-PFDoA	86
13C2-PFTeDA	88
d3-MeFOSAA	67
d5-EtFOSAA	71
13C3-PFBS	99
13C3-PFHxS	94
13C8-PFOS	82

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

Client ID		VC-CS10-SB01-0506			
Battelle ID		J8673-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.04			
Matrix		SB			
Sample Size		1.57			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.27 U	0.42	1.27	6.37
PFHpA	375-85-9	1.27 U	0.56	1.27	6.37
PFOA	335-67-1	1.27 U	0.64	1.27	6.37
PFNA	375-95-1	1.27 U	0.55	1.27	6.37
PFDA	335-76-2	1.27 U	0.34	1.27	6.37
PFUnA	2058-94-8	1.27 U	0.52	1.27	6.37
PFDoA	307-55-1	0.64 U	0.31	0.64	6.37
PFTrDA	72629-94-8	1.27 U	0.36	1.27	6.37
PFTeDA	376-06-7	2.55 U	0.80	2.55	6.37
NMeFOSAA	2355-31-9	3.18 U	1.43	3.18	6.37
NEtFOSAA	2991-50-6	2.55 U	0.73	2.55	6.37
PFBS	375-73-5	1.27 U	0.46	1.27	6.37
PFHxS	355-46-4	0.64 U	0.28	0.64	6.37
PFOS	1763-23-1	1.27 U	0.34	1.27	6.37

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	91
13C8-PFOA	91
13C9-PFNA	83
13C6-PFDA	85
13C7-PFUnA	96
13C2-PFDoA	89
13C2-PFTeDA	90
d3-MeFOSAA	80
d5-EtFOSAA	88
13C3-PFBS	111
13C3-PFHxS	98
13C8-PFOS	85

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

Client ID		VC-CS10-SS02-000H			
Battelle ID		J8674-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.71			
Matrix		SS			
Sample Size		1.96			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.10
PFHpA	375-85-9	1.02 U	0.45	1.02	5.10
PFOA	335-67-1	1.02 U	0.51	1.02	5.10
PFNA	375-95-1	1.02 U	0.44	1.02	5.10
PFDA	335-76-2	1.02 U	0.28	1.02	5.10
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.10
PFDoA	307-55-1	0.51 U	0.24	0.51	5.10
PFTrDA	72629-94-8	1.02 U	0.29	1.02	5.10
PFTeDA	376-06-7	2.04 U	0.64	2.04	5.10
NMeFOSAA	2355-31-9	2.55 U	1.14	2.55	5.10
NEtFOSAA	2991-50-6	2.04 U	0.58	2.04	5.10
PFBS	375-73-5	1.02 U	0.37	1.02	5.10
PFHxS	355-46-4	0.51 U	0.22	0.51	5.10
PFOS	1763-23-1	1.41 J	0.28	1.02	5.10

Surrogate Recoveries (%)

13C5-PFHxA	80
13C4-PFHpA	82
13C8-PFOA	85
13C9-PFNA	71
13C6-PFDA	87
13C7-PFUnA	91
13C2-PFDoA	87
13C2-PFTeDA	97
d3-MeFOSAA	82
d5-EtFOSAA	76
13C3-PFBS	107
13C3-PFHxS	95
13C8-PFOS	88

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

Client ID		VC-CS10-SB02-0102				
Battelle ID		J8675-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		1.02				
Matrix		SB				
Sample Size		1.96				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.02	U	0.34	1.02	5.10
PFHpA	375-85-9	1.02	U	0.45	1.02	5.10
PFOA	335-67-1	1.02	U	0.51	1.02	5.10
PFNA	375-95-1	1.02	U	0.44	1.02	5.10
PFDA	335-76-2	1.02	U	0.28	1.02	5.10
PFUnA	2058-94-8	1.02	U	0.42	1.02	5.10
PFDoA	307-55-1	0.51	U	0.24	0.51	5.10
PFTrDA	72629-94-8	1.02	U	0.29	1.02	5.10
PFTeDA	376-06-7	2.04	U	0.64	2.04	5.10
NMeFOSAA	2355-31-9	2.55	U	1.14	2.55	5.10
NEtFOSAA	2991-50-6	2.04	U	0.58	2.04	5.10
PFBS	375-73-5	1.02	U	0.37	1.02	5.10
PFHxS	355-46-4	0.51	U	0.22	0.51	5.10
PFOS	1763-23-1	1.02	U	0.28	1.02	5.10

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	88
13C8-PFOA	90
13C9-PFNA	74
13C6-PFDA	88
13C7-PFUnA	97
13C2-PFDoA	89
13C2-PFTeDA	97
d3-MeFOSAA	66
d5-EtFOSAA	62
13C3-PFBS	85
13C3-PFHxS	83
13C8-PFOS	83

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

Client ID		VC-CS10-SB02-0506			
Battelle ID		J8676-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.37			
Matrix		SB			
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	1.29 U	0.35	1.29	6.45

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	84
13C8-PFOA	92
13C9-PFNA	77
13C6-PFDA	90
13C7-PFUnA	93
13C2-PFDoA	86
13C2-PFTeDA	91
d3-MeFOSAA	60
d5-EtFOSAA	65
13C3-PFBS	79
13C3-PFHxS	90
13C8-PFOS	80

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_10/19/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/19/2018			
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	106
13C4-PFHpA	103
13C8-PFOA	104
13C9-PFNA	103
13C6-PFDA	99
13C7-PFUnA	101
13C2-PFDoA	102
13C2-PFTeDA	104
d3-MeFOSAA	61
d5-EtFOSAA	64
13C3-PFBS	88
13C3-PFHxS	86
13C8-PFOS	103

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

Client ID		KB80 IB			
Battelle ID		KB80 IB_10/22/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/22/2018			
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	113
13C4-PFHpA	110
13C8-PFOA	107
13C9-PFNA	101
13C6-PFDA	103
13C7-PFUnA	104
13C2-PFDoA	109
13C2-PFTeDA	123
d3-MeFOSAA	113
d5-EtFOSAA	98
13C3-PFBS	96
13C3-PFHxS	95
13C8-PFOS	97

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

Client ID		180507-02: Ottawa Sand				
Battelle ID		CR988PB-FS				
Sample Type		PB				
Collection Date		10/11/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		0.00				
Matrix		SEDIMENT				
Sample Size		2.09				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	0.96	U	0.32	0.96	4.78
PFHpA	375-85-9	0.96	U	0.42	0.96	4.78
PFOA	335-67-1	0.96	U	0.48	0.96	4.78
PFNA	375-95-1	0.96	U	0.41	0.96	4.78
PFDA	335-76-2	0.96	U	0.26	0.96	4.78
PFUnA	2058-94-8	0.96	U	0.39	0.96	4.78
PFDoA	307-55-1	0.48	U	0.23	0.48	4.78
PFTrDA	72629-94-8	0.96	U	0.27	0.96	4.78
PFTeDA	376-06-7	1.91	U	0.60	1.91	4.78
NMeFOSAA	2355-31-9	2.39	U	1.07	2.39	4.78
NEtFOSAA	2991-50-6	1.91	U	0.55	1.91	4.78
PFBS	375-73-5	0.96	U	0.34	0.96	4.78
PFHxS	355-46-4	0.48	U	0.21	0.48	4.78
PFOS	1763-23-1	0.96	U	0.26	0.96	4.78

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	92
13C8-PFOA	91
13C9-PFNA	78
13C6-PFDA	95
13C7-PFUnA	101
13C2-PFDoA	96
13C2-PFTeDA	100
d3-MeFOSAA	72
d5-EtFOSAA	77
13C3-PFBS	99
13C3-PFHxS	99
13C8-PFOS	97

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

Client ID		180507-02: Ottawa Sand					
Battelle ID		CR989LCS-FS					
Sample Type		LCS					
Collection Date		10/11/2018					
Extraction Date		10/11/2018					
Analysis Date		10/20/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		0.00					
Matrix		SEDIMENT					
Sample Size		2.10					
Size Unit-Basis		g				Control Limits	
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	10.50	9.62	109		45	135
PFHpA	375-85-9	10.41	9.52	109		60	128
PFOA	335-67-1	10.39	9.52	109		56	136
PFNA	375-95-1	11.10	9.52	117		54	130
PFDA	335-76-2	10.53	9.52	111		55	141
PFUnA	2058-94-8	9.67	9.52	102		57	137
PFDoA	307-55-1	10.83	9.52	114		62	134
PFTrDA	72629-94-8	10.42	9.52	109		51	127
PFTeDA	376-06-7	10.68	9.52	112		34	162
NMeFOSAA	2355-31-9	13.07	9.52	137		52	146
NEtFOSAA	2991-50-6	9.77	9.52	103		54	124
PFBS	375-73-5	9.67	9.62	101		57	145
PFHxS	355-46-4	10.39	9.62	108		52	132
PFOS	1763-23-1	10.03	9.52	105		50	130

Surrogate Recoveries (%)

13C5-PFHxA	85
13C4-PFHpA	78
13C8-PFOA	86
13C9-PFNA	79
13C6-PFDA	76
13C7-PFUnA	88
13C2-PFDoA	82
13C2-PFTeDA	88
d3-MeFOSAA	67
d5-EtFOSAA	83
13C3-PFBS	105
13C3-PFHxS	97
13C8-PFOS	91

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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 18-0610

Project:	CTO-4164 Naval Base Ventura County, California
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SS, SB
Data Set:	DP-18-0306
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
10/6/2018	10/9/2018	0.9, 1.1, and 1.7
Corrective Actions	None.	
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. Sample VC-CS12-SB01-0506 (J8660) was very viscous and difficult to weigh out.
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. Where detected in samples, PFOS is a mixture of linear and branched isomers

Holding Times	Extraction Date(s)	Analysis Date(s)
	10/11/2018	10/17, 19-20, 22/2018

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

QA/QC Summary
Batch 18-0610

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	MS/MSD not extracted with batch.
	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.
	J8665-FS(3) was re-aliquoted and re-run to confirm failing surrogate, the re-run passed criteria and was reported, original run is in unused data.

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.

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: 18-0610
Data Set: DP-18-0306
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	NA	NA
Matrix Spike / Matrix Spike Duplicate Precision	NA	NA
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-18-0306
Project Number:	100110125-01	**Prep Batch Number:**	18-0610
Entered By:	Lauren Griffith	**Entered On:**	10/24/2018
Test Code (Matrix Type):	Master_369(S)		

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

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: 2018.10.24 14:21:53 -04'00'

Example Calculation for PFAS

Calculation of final concentration from area:

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

Where:

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

Sample ID:	J8659-FS(3)
Client Sample ID:	VC-CS12-SB01-0102
Sample Size:	1.86
Units:	g
Dilution Factor:	10.000
PIV (L):	0.001
Target Analyte:	PFHxS
MRM Transition:	399.0 / 80.0
Data file:	Data18-0590_18-01588_18-0589.wiff (calibration) and 10192018.wiff (sample)
Result table:	18-0610_18-0611_BASE
Area:	161,719.49
IS Name:	13C3-PFHxS
IS Area:	24,024.98
IS Amount (ng/L):	236.5
y-intercept:	0.28942
slope:	3.40443

$$\text{Concentration} = \frac{[(161719.49/24024.98) - 0.28942]}{3.40443} * 236.5 * 0.001 * 10 / 1.86$$

ng/g = 2.41

*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: 18-0610
Data Set: DP-18-0306

		CR988PB-FS (180507-02: Ottawa Sand)	CR989LCS-FS (180507-02: Ottawa Sand)	J8658-FS (VC-CS12-SS01-000H)	J8659-FS (VC-CS12-SB01-0102)	J8660-FS (VC-CS12-SB01-0506)	J8661-FS (VC-CS12-SS02-000H)
PFHxA	307-24-4	-	L	-	-	-	-
PFHpA	375-85-9	-	L	-	-	-	-
PFOA	335-67-1	-	L	-	-	-	-
PFNA	375-95-1	-	L	-	-	-	-
PFDA	335-76-2	-	L	-	-	-	-
PFUnA	2058-94-8	-	L	-	-	-	-
PFDoA	307-55-1	-	L	-	-	-	-
PFTrDA	72629-94-8	-	L	-	-	-	-
PFTeDA	376-06-7	-	L	-	-	-	-
NMeFOSAA	2355-31-9	-	L	-	-	-	-
NEtFOSAA	2991-50-6	-	L	-	-	-	-
PFBS	375-73-5	-	L	-	-	-	-
PFHxS	355-46-4	-	L/Br	-	-	-	-
PFOS	1763-23-1	-	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-

	J8662-FS (VC-CS12-SB02-0102)	J8663-FS (VC-CS12-SB02-0506)	J8664-FS (VC-CS12-SS03-000H)	J8665-FS (VC-CS12-SB03-0102)	J8666-FS (VC-CS12-SB03-0506)	J8671-FS (VC-CS10-SS01-000H)	J8672-FS (VC-CS10-SB01-0102)	J8673-FS (VC-CS10-SB01-0506)
PFHxA	-	-	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	-	-	-	-
PFHxS	L/Br	-	-	-	-	-	-	-
PFOS	-	-	-	-	-	-	-	-

"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-

	J8674-FS (VC-CS10-SS02-000H)	J8675-FS (VC-CS10-SB02-0102)	J8676-FS (VC-CS10-SB02-0506)
PFHxA	-	-	-
PFHpA	-	-	-
PFOA	-	-	-
PFNA	-	-	-
PFDA	-	-	-
PFUnA	-	-	-
PFDoA	-	-	-
PFTrDA	-	-	-
PFTeDA	-	-	-
NMeFOSAA	-	-	-
NEtFOSAA	-	-	-
PFBS	-	-	-
PFHxS	-	-	-
PFOS	-	-	-

"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	10/19/18 18:16	13C2-PFOA	81,344.96	40,184.56	120,553.68	
KB80 IB	IB	10/19/18 18:27	13C2-PFOA	68,811.37	40,184.56	120,553.68	
KB76 CCV	CCV	10/19/18 23:53	13C2-PFOA	81,456.60	40,184.56	120,553.68	
CR988PB-FS(3)	Procedural Blank	10/20/18 0:15	13C2-PFOA	87,692.70	40,184.56	120,553.68	
CR989LCS-FS(3)	Laboratory Control Sample	10/20/18 0:26	13C2-PFOA	80,034.07	40,184.56	120,553.68	
J8658-FS(3)	VC-CS12-SS01-000H	10/20/18 0:37	13C2-PFOA	84,521.55	40,184.56	120,553.68	
J8659-FS(3)	VC-CS12-SB01-0102	10/20/18 0:48	13C2-PFOA	108,728.13	40,184.56	120,553.68	
J8660-FS(3)	VC-CS12-SB01-0506	10/20/18 0:59	13C2-PFOA	87,861.48	40,184.56	120,553.68	
J8661-FS(3)	VC-CS12-SS02-000H	10/20/18 1:09	13C2-PFOA	85,586.84	40,184.56	120,553.68	
~~J8662-FS-D(5)~~	~~VC-CS12-SB02-0102~~	~~10/20/18 1:20~~	~~13C2-PFOA~~	~~89,651.66~~	~~40,184.56~~	~~120,553.68~~	(1)
J8662-FS(3)	VC-CS12-SB02-0102	10/20/18 1:31	13C2-PFOA	91,953.42	40,184.56	120,553.68	
J8663-FS(3)	VC-CS12-SB02-0506	10/20/18 1:42	13C2-PFOA	87,773.44	40,184.56	120,553.68	
J8664-FS(3)	VC-CS12-SS03-000H	10/20/18 1:53	13C2-PFOA	86,933.26	40,184.56	120,553.68	
KB77 CCV	CCV	10/20/18 2:04	13C2-PFOA	88,078.02	40,184.56	120,553.68	
~~J8665-FS(3)~~	~~VC-CS12-SB03-0102~~	~~10/20/18 2:25~~	~~13C2-PFOA~~	~~90,190.84~~	~~40,184.56~~	~~120,553.68~~	(1)
J8666-FS(3)	VC-CS12-SB03-0506	10/20/18 2:36	13C2-PFOA	99,092.62	40,184.56	120,553.68	
J8671-FS(3)	VC-CS10-SS01-000H	10/20/18 2:47	13C2-PFOA	96,291.40	40,184.56	120,553.68	
J8672-FS(3)	VC-CS10-SB01-0102	10/20/18 2:58	13C2-PFOA	86,938.94	40,184.56	120,553.68	
J8673-FS(3)	VC-CS10-SB01-0506	10/20/18 3:09	13C2-PFOA	86,224.06	40,184.56	120,553.68	
J8674-FS(3)	VC-CS10-SS02-000H	10/20/18 3:20	13C2-PFOA	88,926.34	40,184.56	120,553.68	
J8675-FS(3)	VC-CS10-SB02-0102	10/20/18 3:31	13C2-PFOA	89,044.49	40,184.56	120,553.68	
J8676-FS(3)	VC-CS10-SB02-0506	10/20/18 3:41	13C2-PFOA	89,852.09	40,184.56	120,553.68	
KB76 CCV	CCV	10/20/18 3:52	13C2-PFOA	84,541.88	40,184.56	120,553.68	
KB75 ISC	ISC	10/22/18 19:32	13C2-PFOA	65,034.12	40,184.56	120,553.68	
KB80 IB	IB	10/22/18 19:43	13C2-PFOA	70,816.22	40,184.56	120,553.68	
J8665-FS(3)	VC-CS12-SB03-0102	10/22/18 20:16	13C2-PFOA	82,248.76	40,184.56	120,553.68	
KB77 CCV	CCV	10/22/18 21:43	13C2-PFOA	71,298.17	40,184.56	120,553.68	

(1) see Sequence Report for details. LMG 10/30/18

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

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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	10/19/18 18:16	13C2-PFDA	90,191.16	45,064.85	135,194.55	
KB80 IB	IB	10/19/18 18:27	13C2-PFDA	83,787.58	45,064.85	135,194.55	
KB76 CCV	CCV	10/19/18 23:53	13C2-PFDA	93,321.16	45,064.85	135,194.55	
CR988PB-FS(3)	Procedural Blank	10/20/18 0:15	13C2-PFDA	94,119.90	45,064.85	135,194.55	
CR989LCS-FS(3)	Laboratory Control Sample	10/20/18 0:26	13C2-PFDA	98,050.15	45,064.85	135,194.55	
J8658-FS(3)	VC-CS12-SS01-000H	10/20/18 0:37	13C2-PFDA	96,014.76	45,064.85	135,194.55	
J8659-FS(3)	VC-CS12-SB01-0102	10/20/18 0:48	13C2-PFDA	121,289.05	45,064.85	135,194.55	
J8660-FS(3)	VC-CS12-SB01-0506	10/20/18 0:59	13C2-PFDA	103,544.44	45,064.85	135,194.55	
J8661-FS(3)	VC-CS12-SS02-000H	10/20/18 1:09	13C2-PFDA	94,996.92	45,064.85	135,194.55	
~~J8662-FS-D(5)~~	~~VC-CS12-SB02-0102~~	~~10/20/18 1:20~~	~~13C2-PFDA~~	~~103,887.33~~	~~45,064.85~~	~~135,194.55~~	(1)
J8662-FS(3)	VC-CS12-SB02-0102	10/20/18 1:31	13C2-PFDA	101,050.06	45,064.85	135,194.55	
J8663-FS(3)	VC-CS12-SB02-0506	10/20/18 1:42	13C2-PFDA	93,138.16	45,064.85	135,194.55	
J8664-FS(3)	VC-CS12-SS03-000H	10/20/18 1:53	13C2-PFDA	101,662.82	45,064.85	135,194.55	
KB77 CCV	CCV	10/20/18 2:04	13C2-PFDA	94,870.15	45,064.85	135,194.55	
~~J8665-FS(3)~~	~~VC-CS12-SB03-0102~~	~~10/20/18 2:25~~	~~13C2-PFDA~~	~~106,038.25~~	~~45,064.85~~	~~135,194.55~~	(1)
J8666-FS(3)	VC-CS12-SB03-0506	10/20/18 2:36	13C2-PFDA	115,743.70	45,064.85	135,194.55	
J8671-FS(3)	VC-CS10-SS01-000H	10/20/18 2:47	13C2-PFDA	112,434.64	45,064.85	135,194.55	
J8672-FS(3)	VC-CS10-SB01-0102	10/20/18 2:58	13C2-PFDA	105,180.18	45,064.85	135,194.55	
J8673-FS(3)	VC-CS10-SB01-0506	10/20/18 3:09	13C2-PFDA	101,709.85	45,064.85	135,194.55	
J8674-FS(3)	VC-CS10-SS02-000H	10/20/18 3:20	13C2-PFDA	97,075.74	45,064.85	135,194.55	
J8675-FS(3)	VC-CS10-SB02-0102	10/20/18 3:31	13C2-PFDA	98,016.41	45,064.85	135,194.55	
J8676-FS(3)	VC-CS10-SB02-0506	10/20/18 3:41	13C2-PFDA	101,856.90	45,064.85	135,194.55	
KB76 CCV	CCV	10/20/18 3:52	13C2-PFDA	98,128.99	45,064.85	135,194.55	
KB75 ISC	ISC	10/22/18 19:32	13C2-PFDA	81,108.92	45,064.85	135,194.55	
KB80 IB	IB	10/22/18 19:43	13C2-PFDA	91,293.54	45,064.85	135,194.55	
J8665-FS(3)	VC-CS12-SB03-0102	10/22/18 20:16	13C2-PFDA	99,164.13	45,064.85	135,194.55	
KB77 CCV	CCV	10/22/18 21:43	13C2-PFDA	85,471.32	45,064.85	135,194.55	

(1) see Sequence Report for details. LMG 10/30/18

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	10/19/18 18:16	13C4-PFOS	31,112.11	15,759.13	47,277.39	
KB80 IB	IB	10/19/18 18:27	13C4-PFOS	28,447.31	15,759.13	47,277.39	
KB76 CCV	CCV	10/19/18 23:53	13C4-PFOS	28,185.29	15,759.13	47,277.39	
CR988PB-FS(3)	Procedural Blank	10/20/18 0:15	13C4-PFOS	27,564.18	15,759.13	47,277.39	
CR989LCS-FS(3)	Laboratory Control Sample	10/20/18 0:26	13C4-PFOS	24,940.00	15,759.13	47,277.39	
J8658-FS(3)	VC-CS12-SS01-000H	10/20/18 0:37	13C4-PFOS	25,850.32	15,759.13	47,277.39	
J8659-FS(3)	VC-CS12-SB01-0102	10/20/18 0:48	13C4-PFOS	36,707.27	15,759.13	47,277.39	
J8660-FS(3)	VC-CS12-SB01-0506	10/20/18 0:59	13C4-PFOS	31,450.84	15,759.13	47,277.39	
J8661-FS(3)	VC-CS12-SS02-000H	10/20/18 1:09	13C4-PFOS	27,426.75	15,759.13	47,277.39	
~~J8662-FS-D(5)~~	~~VC-CS12-SB02-0102~~	~~10/20/18 1:20~~	~~13C4-PFOS~~	~~29,325.72~~	~~15,759.13~~	~~47,277.39~~	(1)
J8662-FS(3)	VC-CS12-SB02-0102	10/20/18 1:31	13C4-PFOS	28,229.30	15,759.13	47,277.39	
J8663-FS(3)	VC-CS12-SB02-0506	10/20/18 1:42	13C4-PFOS	32,201.78	15,759.13	47,277.39	
J8664-FS(3)	VC-CS12-SS03-000H	10/20/18 1:53	13C4-PFOS	30,930.67	15,759.13	47,277.39	
KB77 CCV	CCV	10/20/18 2:04	13C4-PFOS	27,492.93	15,759.13	47,277.39	
~~J8665-FS(3)~~	~~VC-CS12-SB03-0102~~	~~10/20/18 2:25~~	~~13C4-PFOS~~	~~30,771.62~~	~~15,759.13~~	~~47,277.39~~	(1)
J8666-FS(3)	VC-CS12-SB03-0506	10/20/18 2:36	13C4-PFOS	32,093.67	15,759.13	47,277.39	
J8671-FS(3)	VC-CS10-SS01-000H	10/20/18 2:47	13C4-PFOS	34,753.40	15,759.13	47,277.39	
J8672-FS(3)	VC-CS10-SB01-0102	10/20/18 2:58	13C4-PFOS	29,153.94	15,759.13	47,277.39	
J8673-FS(3)	VC-CS10-SB01-0506	10/20/18 3:09	13C4-PFOS	25,642.15	15,759.13	47,277.39	
J8674-FS(3)	VC-CS10-SS02-000H	10/20/18 3:20	13C4-PFOS	25,512.03	15,759.13	47,277.39	
J8675-FS(3)	VC-CS10-SB02-0102	10/20/18 3:31	13C4-PFOS	31,936.08	15,759.13	47,277.39	
J8676-FS(3)	VC-CS10-SB02-0506	10/20/18 3:41	13C4-PFOS	31,867.79	15,759.13	47,277.39	
KB76 CCV	CCV	10/20/18 3:52	13C4-PFOS	29,192.54	15,759.13	47,277.39	
KB75 ISC	ISC	10/22/18 19:32	13C4-PFOS	21,697.25	15,759.13	47,277.39	
KB80 IB	IB	10/22/18 19:43	13C4-PFOS	27,153.34	15,759.13	47,277.39	
J8665-FS(3)	VC-CS12-SB03-0102	10/22/18 20:16	13C4-PFOS	28,053.75	15,759.13	47,277.39	
KB77 CCV	CCV	10/22/18 21:43	13C4-PFOS	25,728.25	15,759.13	47,277.39	

(1) see Sequence Report for details. LMG 10/30/18

BATTELLE

Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 24/10/2018 1:06:46 PM

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**	18-0610_18-0611_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

Created with Analyst Reporter
Printed: 24/10/2018 1:06:05 PM

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**	18-0610_18-0611_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

Zef Scientific Inc.

12707 High Bluff Dr.
Suite 200
San Diego, CA
USA 92130

1975 Hymus Blvd.
Suite 230
Dorval, QC
Canada H9P 1J8

Phone: 1.866.854.7988

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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Zef Scientific Inc.

12707 High Bluff Dr.
Suite 200
San Diego, CA
USA 92130

1975 Hymus Blvd.
Suite 230
Dorval, QC
Canada H9P 1J8

Phone: 1.866.854.7988

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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1975 Hymus Blvd.
Suite 230
Dorval, QC
Canada H9P 1J8

Phone: 1.866.854.7988

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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USA 92130

1975 Hymus Blvd.
Suite 230
Dorval, QC
Canada H9P 1J8

Phone: 1.866.854.7988

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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Suite 200
San Diego, CA
USA 92130

1975 Hymus Blvd.
Suite 230
Dorval, QC
Canada H9P 1J8

Phone: 1.866.854.7988

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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Suite 200
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USA 92130

1975 Hymus Blvd.
Suite 230
Dorval, QC
Canada H9P 1J8

Phone: 1.866.854.7988

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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Zef Scientific Inc.

12707 High Bluff Dr.
Suite 200
San Diego, CA
USA 92130

1975 Hymus Blvd.
Suite 230
Dorval, QC
Canada H9P 1J8

Phone: 1.866.854.7988

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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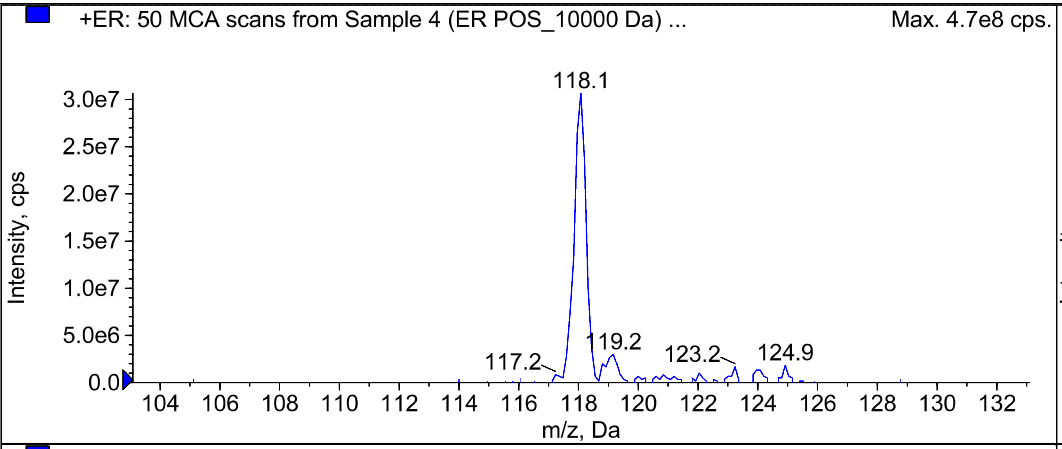
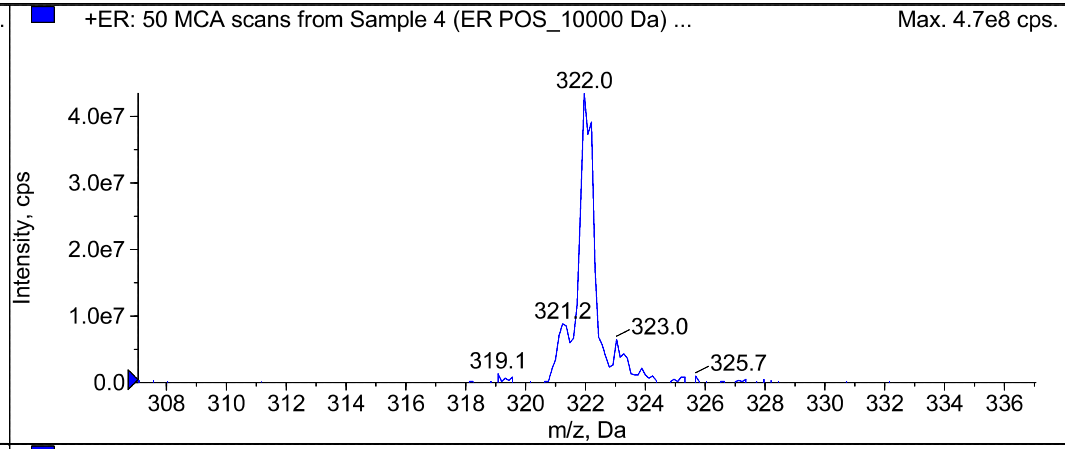
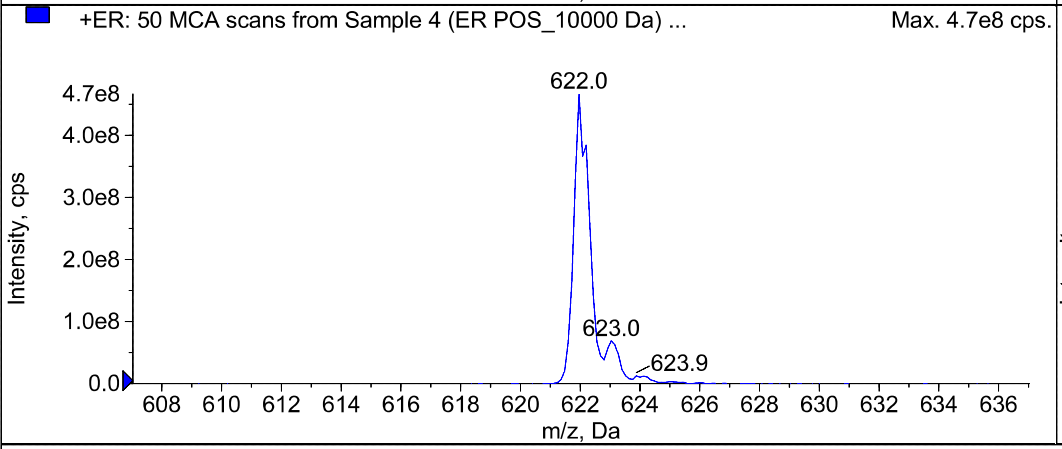
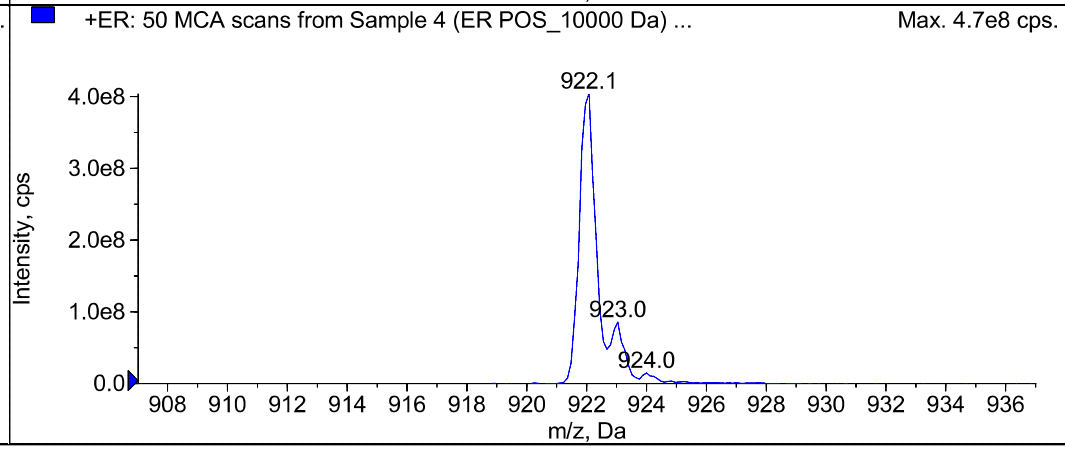








Peak List for " +ER: 50 MCA scans from Sample 4 (ER POS_10000 Da) of TRAP ER with NEW Pulse Manifold.wiff (Turbo Spray)"

	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 Labelled Extracted Internal Standards (SIS)	-	180726-05
KB72	PFAS - DoD Low Level Labelled Extracted Internal Standard (SIS)	KB71	180726-05
KC02	PFAS - DoD High Level Second Source LCS/MS Solution	-	181001-01
KC03	PFAS - DoD Internal Standard Spiking Solution	JY25	180726-04
KB73	PFAS - DoD Calibration L1	KB71	180726-05
KB73	PFAS - DoD Calibration L1	JY25	180726-04
KB73	PFAS - DoD Calibration L1	JY23	180705-02
KB74	PFAS - DoD Calibration L2	JY25	180726-04
KB74	PFAS - DoD Calibration L2	KB71	180726-05
KB74	PFAS - DoD Calibration L2	JY23	180705-02
KB75	PFAS - DoD Calibration L3	KB71	180726-05
KB75	PFAS - DoD Calibration L3	JY25	180726-04
KB75	PFAS - DoD Calibration L3	KB70	180705-02
KB76	PFAS - DoD Calibration L4	KB70	180705-02
KB76	PFAS - DoD Calibration L4	JY25	180726-04
KB76	PFAS - DoD Calibration L4	KB71	180726-05
KB77	PFAS - DoD Calibration L5	KB71	180726-05
KB77	PFAS - DoD Calibration L5	KB70	180705-02
KB77	PFAS - DoD Calibration L5	JY25	180726-04
KB78	PFAS - DoD Calibraiton L6	JY25	180726-04
KB78	PFAS - DoD Calibraiton L6	KB70	180705-02
KB78	PFAS - DoD Calibraiton L6	KB71	180726-05
KB79	PFAS - DoD Calibration L7	KB71	180726-05
KB79	PFAS - DoD Calibration L7	KB70	180705-02
KB79	PFAS - DoD Calibration L7	JY25	180726-04
KB80	PFAS - DoD Instrument Blank	JY25	180726-04
KB80	PFAS - DoD Instrument Blank	KB71	180726-05
KB81	PFAS - DoD ICC	KB82	170724-01
KB81	PFAS - DoD ICC	KB71	180726-05
KB81	PFAS - DoD ICC	JY25	180726-04
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: JY27

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:** 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: Schumitz, Denise **Date:** 8/8/2018 9:17:00 AM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JY27

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:** 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: Schumitz, Denise **Date:** 8/8/2018 9:17:00 AM

BATTELLE

It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: JY27

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:** 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: Schumitz, Denise **Date:** 8/8/2018 9:17:00 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: **KB72**

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

Assigned Lab ID (from receipt log)	Chemical Name:	Source	Stock (ug/mL)	Expir. Date	Purity (%)	Density (g/mL)	Amount Taken	Conv. Fact.	Final Vol. (mL)	Std. Conc. (ug/mL)
KB71	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	Solution	~0	10/01/19	---	---	2500 uL	1	25	~0.0000

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: KB72

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

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	2500	0.05	---	---	1	25	0.00468
13C2-6:2FTS	2500	0.05	---	---	1	25	0.00475
13C2-8:2FTS	2500	0.05	---	---	1	25	0.00479
13C2-PFDoA	2500	0.05	---	---	1	25	0.00500
13C2-PFTeDA	2500	0.05	---	---	1	25	0.00500
13C3-PFBS	2500	0.05	---	---	1	25	0.00465
13C3-PFHxS	2500	0.05	---	---	1	25	0.00473
13C4-PFBA	2500	0.05	---	---	1	25	0.00500
13C4-PFHpA	2500	0.05	---	---	1	25	0.00500
13C5-PFHxA	2500	0.05	---	---	1	25	0.00500
13C5-PFPeA	2500	0.05	---	---	1	25	0.00500
13C6-PFDA	2500	0.05	---	---	1	25	0.00500
13C7-PFUnA	2500	0.05	---	---	1	25	0.00500
13C8-FOSA	2500	0.05	---	---	1	25	0.00500
13C8-PFOA	2500	0.05	---	---	1	25	0.00500
13C8-PFOS	2500	0.05	---	---	1	25	0.00478
13C9-PFNA	2500	0.05	---	---	1	25	0.00500
d3-MeFOSAA	2500	0.05	---	---	1	25	0.00500
d5-EtFOSAA	2500	0.05	---	---	1	25	0.00500

Final Concentrations:

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

Solution Prepared By: Schultz, Stephanie **Date Prepared:** 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: KB72

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

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

Syringes/Pipettes:

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: **KC02**

Description: PFAS - DoD High Level 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)
181001-01	PFOA - 2nd source	Neat	~1.000000	09/20/23	---	---	1000 uL	1	5	~0.2000

Solution Prepared By: Schumitz, Denise	**Date Prepared:** 10/8/2018	**Expiration Date:**	10/8/2019
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:** 10/8/2018 11:44:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC02

Description: PFAS - DoD High Level Second Source LCS/MS Solution

Stock Id: 181001-01

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	5	0.20200
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	1000	1.00	1	100.000	1	5	0.20000
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	1000	1.00	1	100.000	1	5	0.20000
(Na) Perfluoro-1-decanesulfonate	1000	1.01	1	100.000	1	5	0.20200
(NA) Perfluoro-1-heptanesulfonate	1000	1.00	1	100.000	1	5	0.20000
(Na) Perfluoro-1-nonanesulfonate	1000	1.01	1	100.000	1	5	0.20200
N-ethylperfluoro-octanesulfonamidoacetic acid	1000	1.00	1	100.000	1	5	0.20000
N-methylperfluoro-1-octanesulfonamidoacetic acid	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-1-butanesulfonate	1000	1.01	1	100.000	1	5	0.20200
Perfluoro-1-hexanesulfonate	1000	1.01	1	100.000	1	5	0.20200
Perfluoro-1-octanesulfonamide	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-1-octanesulfonate	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-n-butanoic Acid	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-n-decanoic Acid	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-n-dodecanoic acid	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-n-heptanoic Acid	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-n-hexanoic acid	1000	1.01	1	100.000	1	5	0.20200
Perfluoro-n-octanoic Acid	1000	1.00	1	100.000	1	5	0.20000
Perfluorononanoic Acid	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-n-pentanoic acid	1000	1.01	1	100.000	1	5	0.20200
Perfluoro-n-tetradecanoic acid	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-n-tridecanoic acid	1000	1.00	1	100.000	1	5	0.20000
Perfluoro-n-undecanoic acid	1000	1.00	1	100.000	1	5	0.20000
Sodium perfluoro-1-pentanesulfonate	1000	1.00	1	100.000	1	5	0.20000

Final Concentrations:

Analyte:	Conc (ug/mL):
(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate	.20200
(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate	.20000
(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate	.20000
(Na) Perfluoro-1-decanesulfonate	.20200
(NA) Perfluoro-1-heptanesulfonate	.20000
(Na) Perfluoro-1-nonanesulfonate	.20200
N-ethylperfluoro-octanesulfonamidoacetic acid	.20000
N-methylperfluoro-1-octanesulfonamidoacetic acid	.20000
Perfluoro-1-butanesulfonate	.20200

Solution Prepared By: Schumitz, Denise **Date Prepared:** 10/8/2018 **Expiration Date:** 10/8/2019

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:** 10/8/2018 11:44:00 AM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC02

Description: PFAS - DoD High Level Second Source LCS/MS Solution

Perfluoro-1-hexanesulfonate	.20200
Perfluoro-1-octanesulfonamide	.20000
Perfluoro-1-octanesulfonate	.20000
Perfluoro-n-butanoic Acid	.20000
Perfluoro-n-decanoic Acid	.20000
Perfluoro-n-dodecanoic acid	.20000
Perfluoro-n-heptanoic Acid	.20000
Perfluoro-n-hexanoic acid	.20200
Perfluoro-n-octanoic Acid	.20000
Perfluorononanoic Acid	.20000
Perfluoro-n-pentanoic acid	.20200
Perfluoro-n-tetradecanoic acid	.20000
Perfluoro-n-tridecanoic acid	.20000
Perfluoro-n-undecanoic acid	.20000
Sodium perfluoro-1-pentanesulfonate	.20000

Syringes/Pipettes:

Stock ID:	Type:	Battelle ID:
181001-01	Pipette	B820865811

Solution Prepared By: Schumitz, Denise **Date Prepared:** 10/8/2018 **Expiration Date:** 10/8/2019

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:** 10/8/2018 11:44:00 AM

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KC03**

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:**	10/9/2018	**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:** 10/9/2018 4:15:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KC03

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:** 10/9/2018 **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:** 10/9/2018 4:15:00 PM

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

170704-01

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

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

5E-05 Balance Uncertainty
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

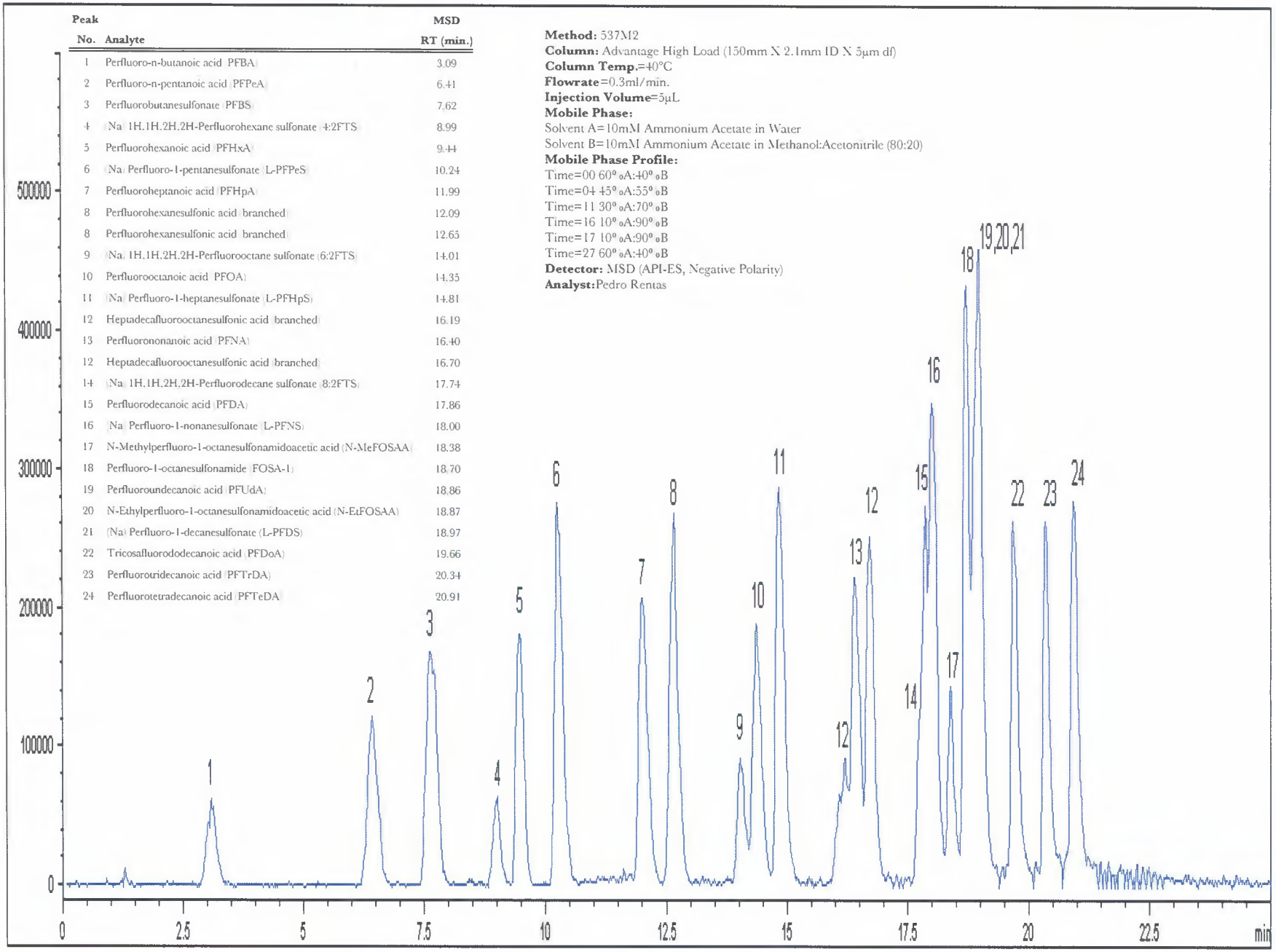
Note: All assigned values are anion concentrations.

	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

It can be done

BDO Id: 180618-02

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-02

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-NEtFOSAA

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

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

DESCRIPTION:

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HANDLING:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. 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)***

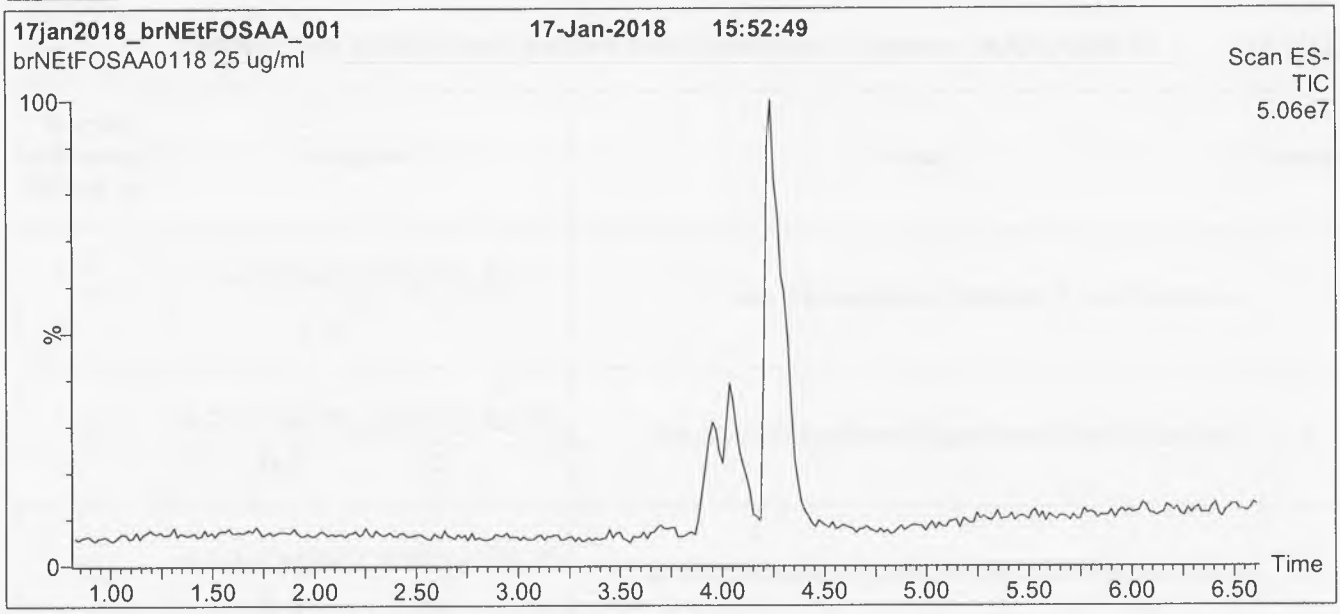
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(C_2H_5)CH_2CO_2H$	77.5
2	N-ethylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	2.3
3	N-ethylperfluoro-4-methylheptanesulfonamidoacetic 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

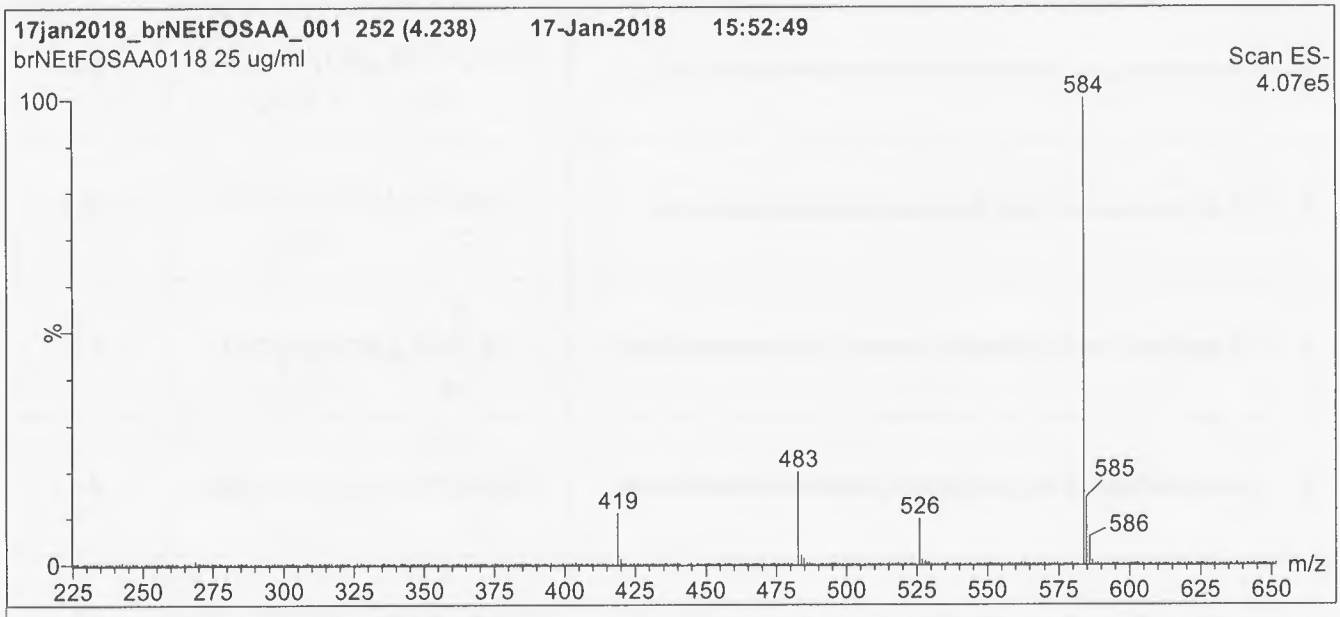
* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

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

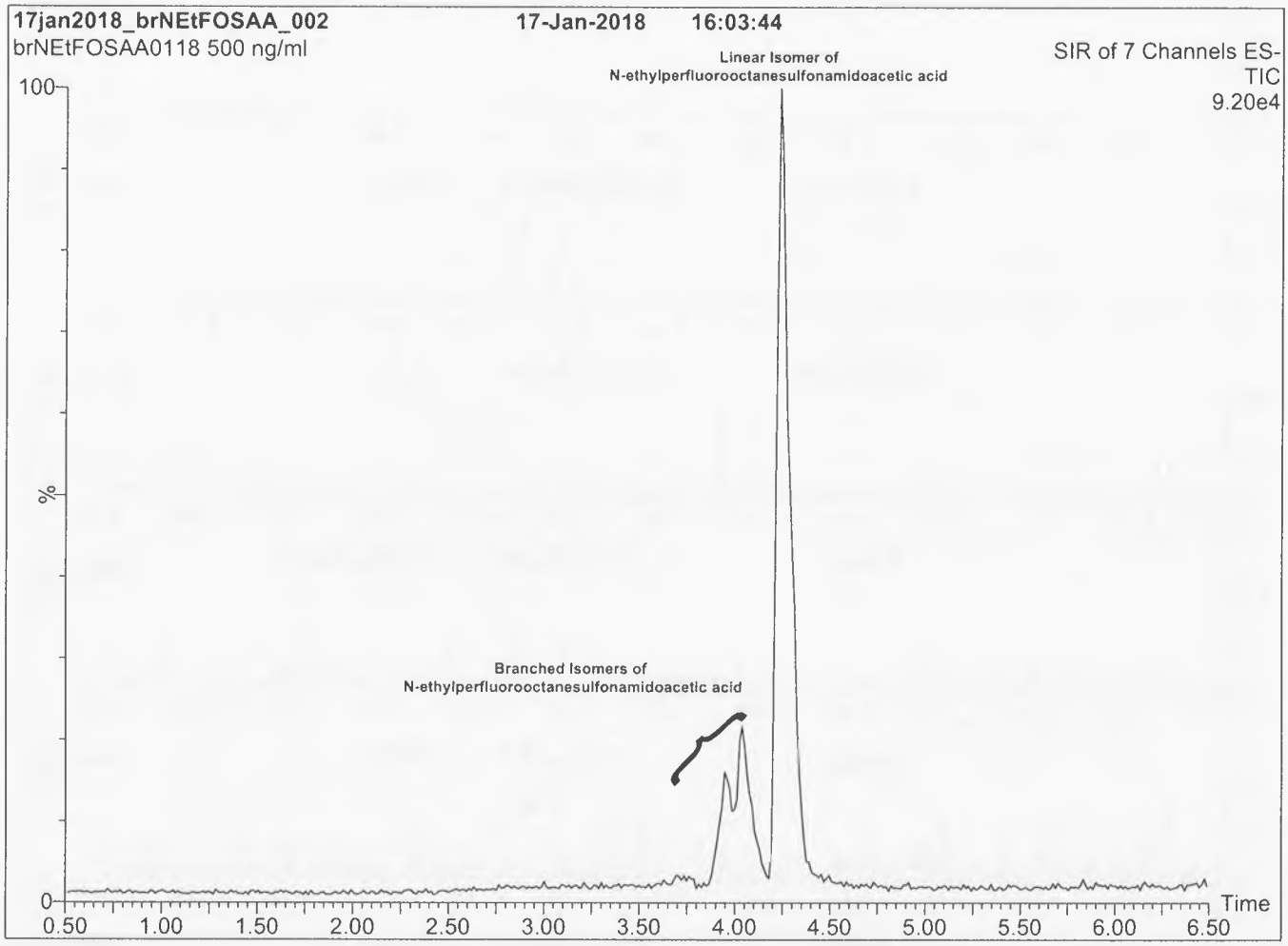
Flow: 300 µl/min

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

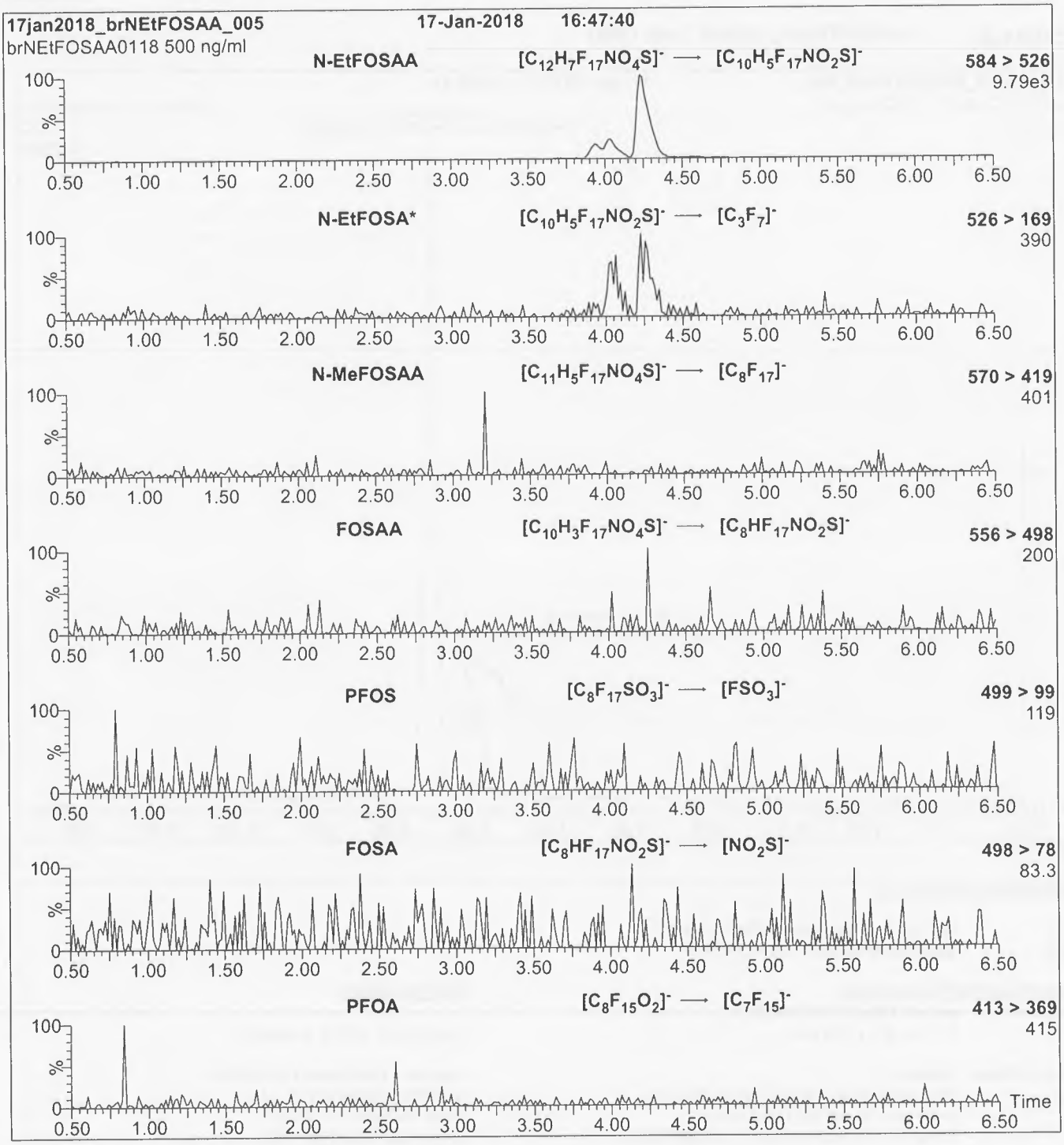
Flow: 300 µl/min

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:

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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)***

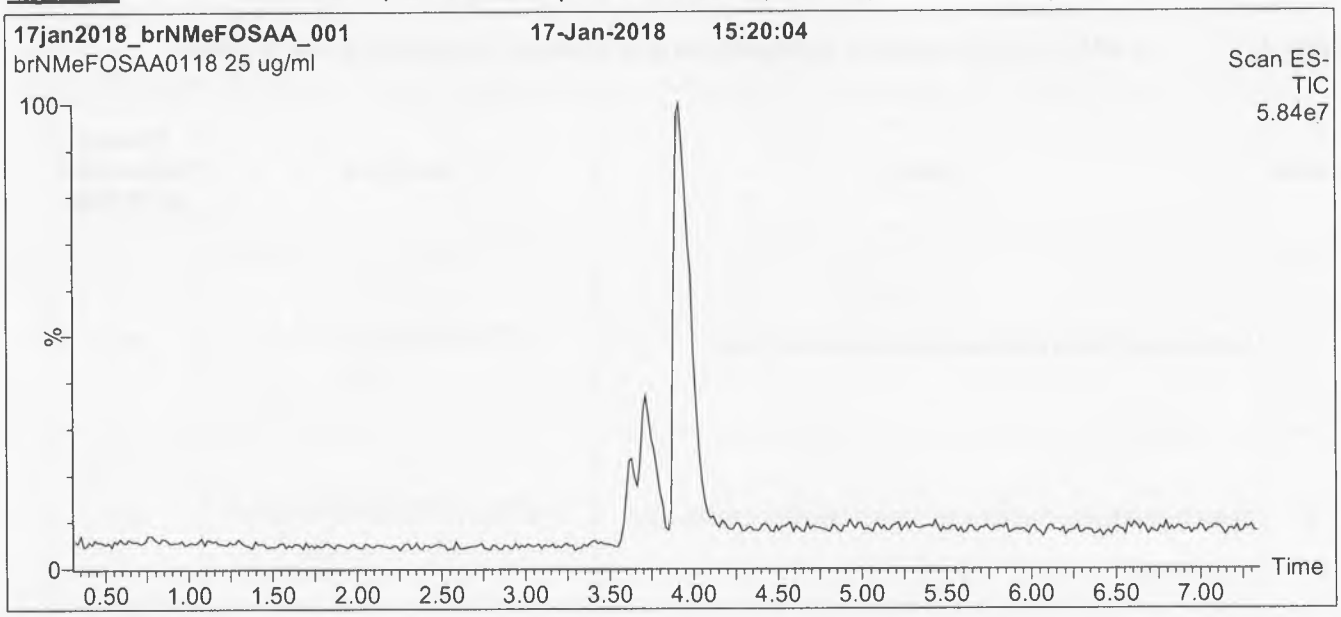
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2H$	76.0
2	N-methylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CO_2H$	0.7
3	N-methylperfluoro-4-methylheptanesulfonamidoacetic 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

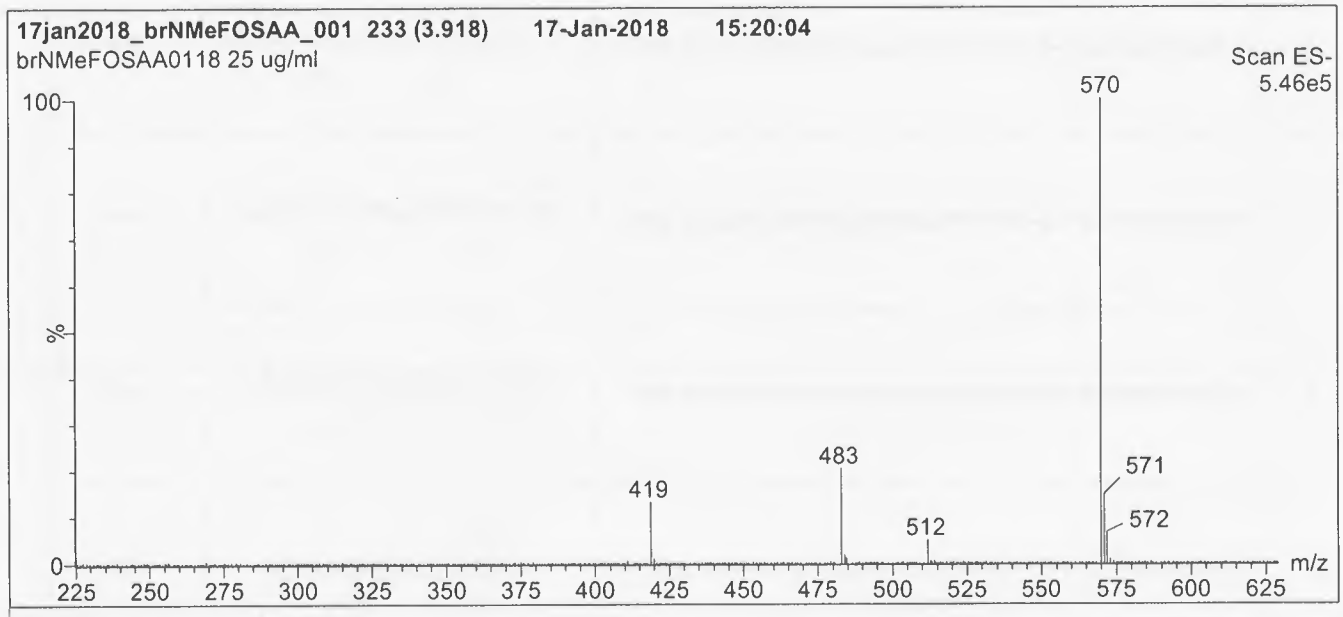
* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

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

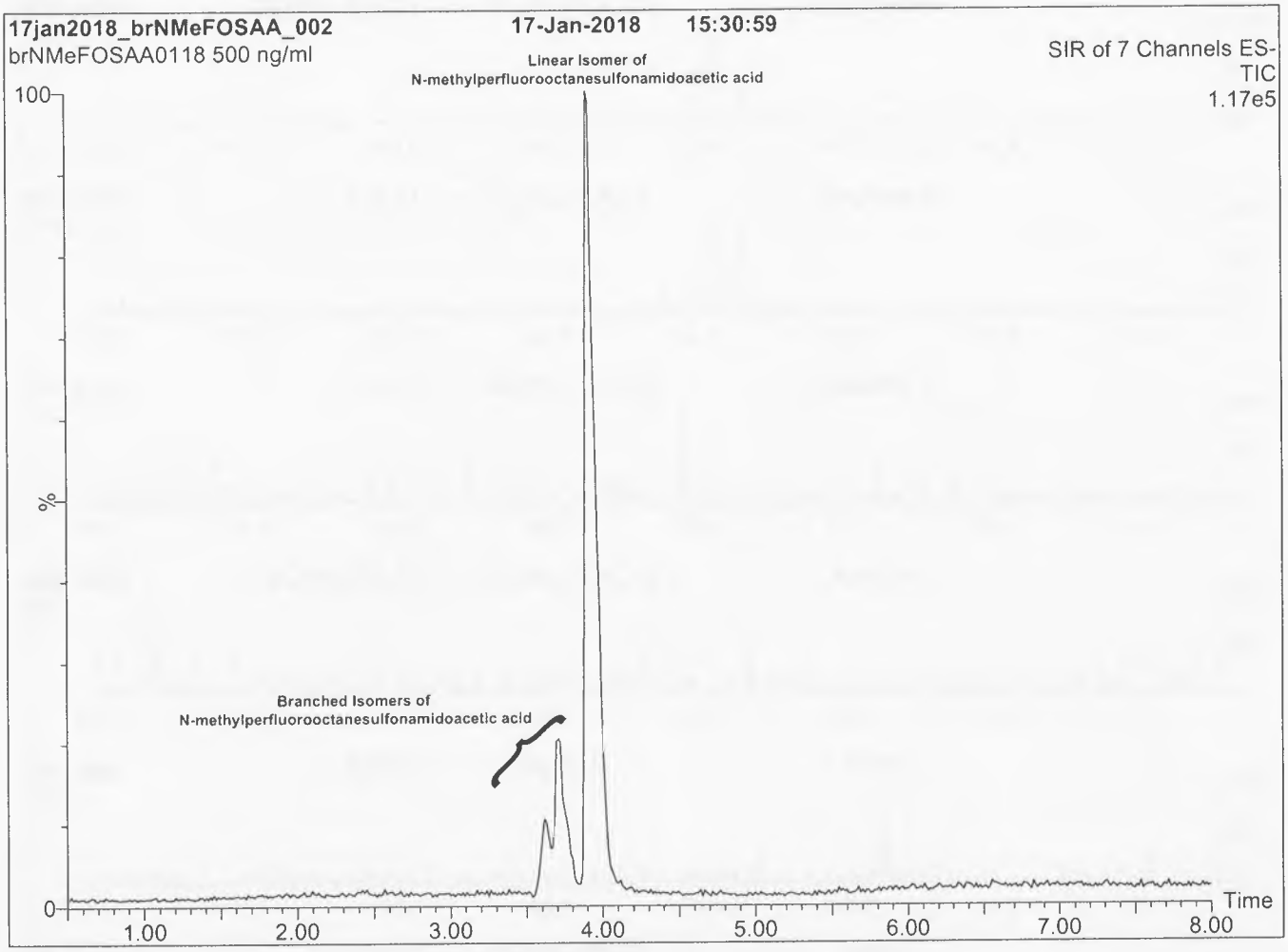
Flow: 300 µl/min

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

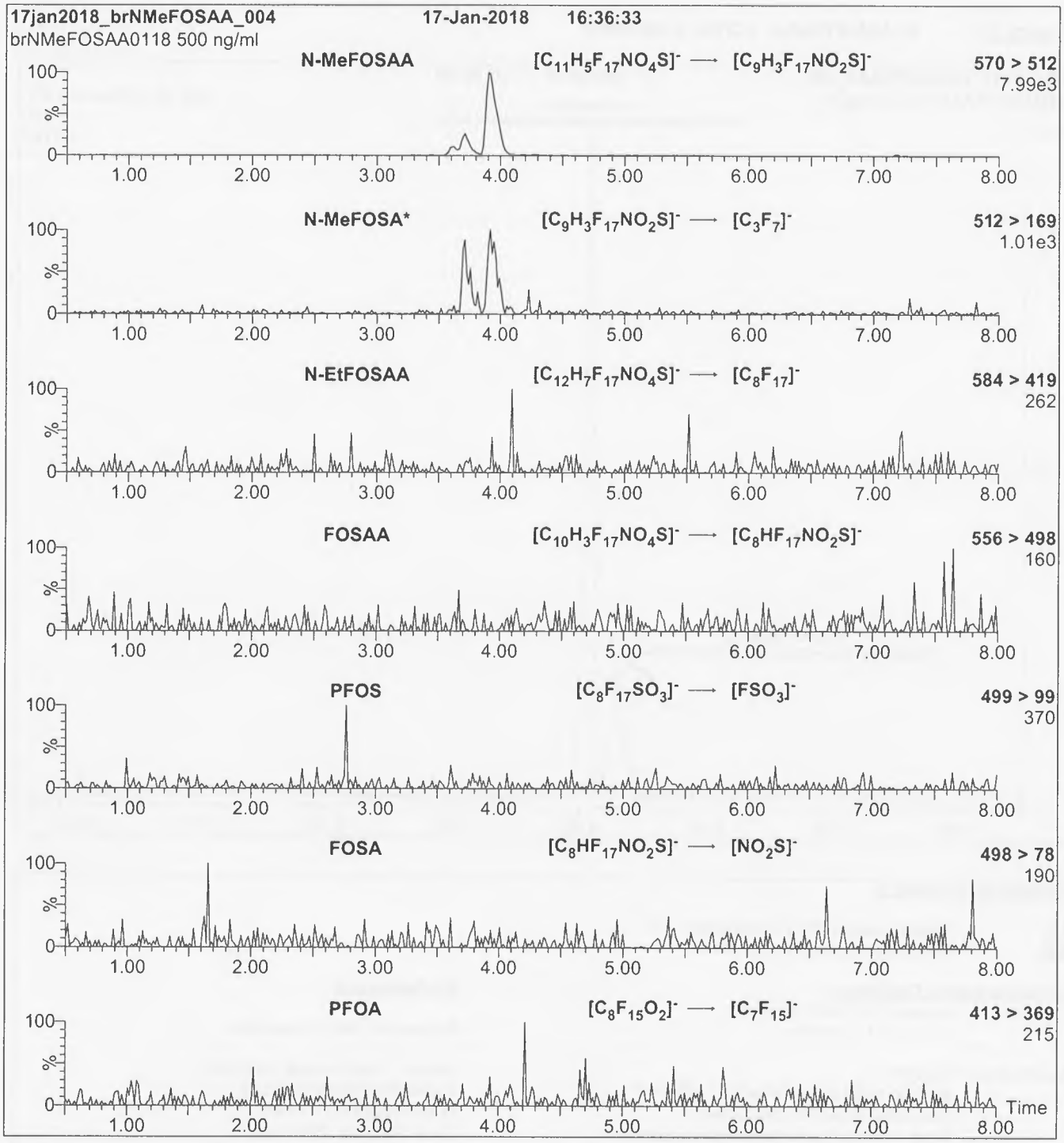
Flow: 300 µl/min

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:

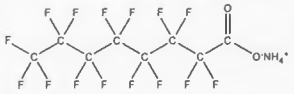
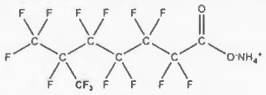
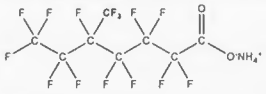
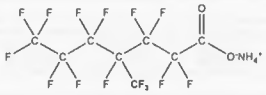
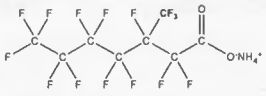
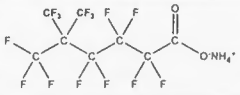
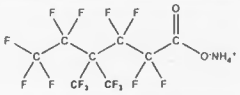
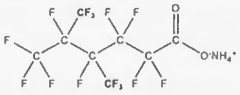
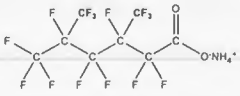
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

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

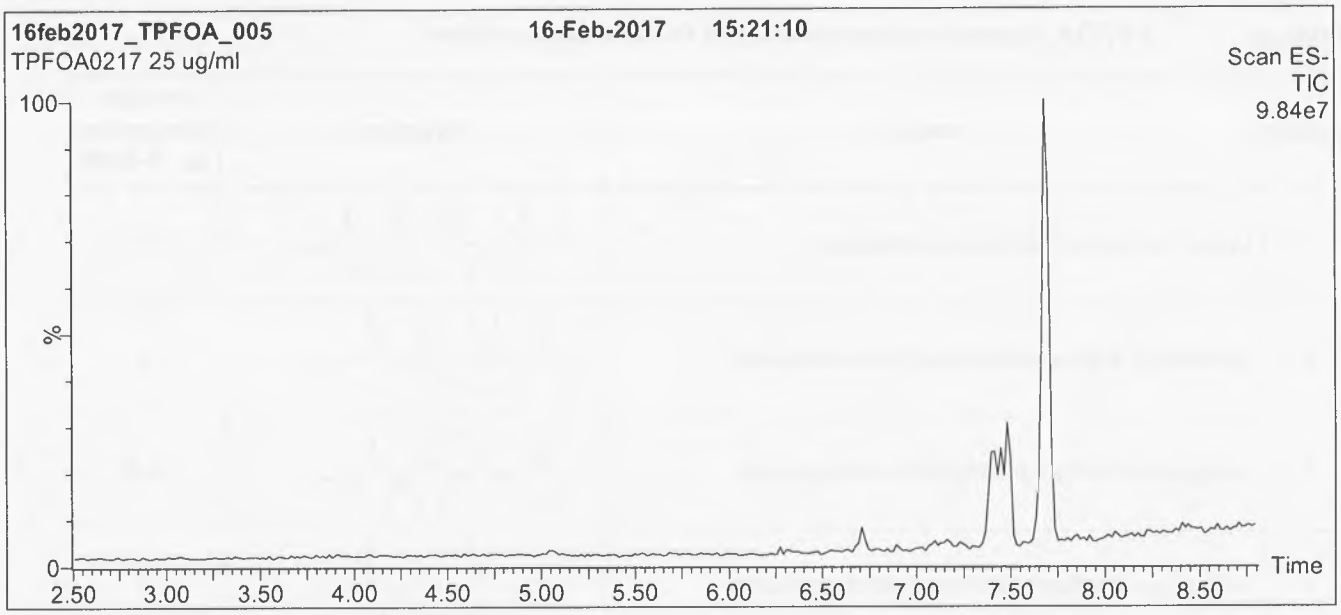
Table A: **T-PFOA; Isomeric Components and Percent Composition***

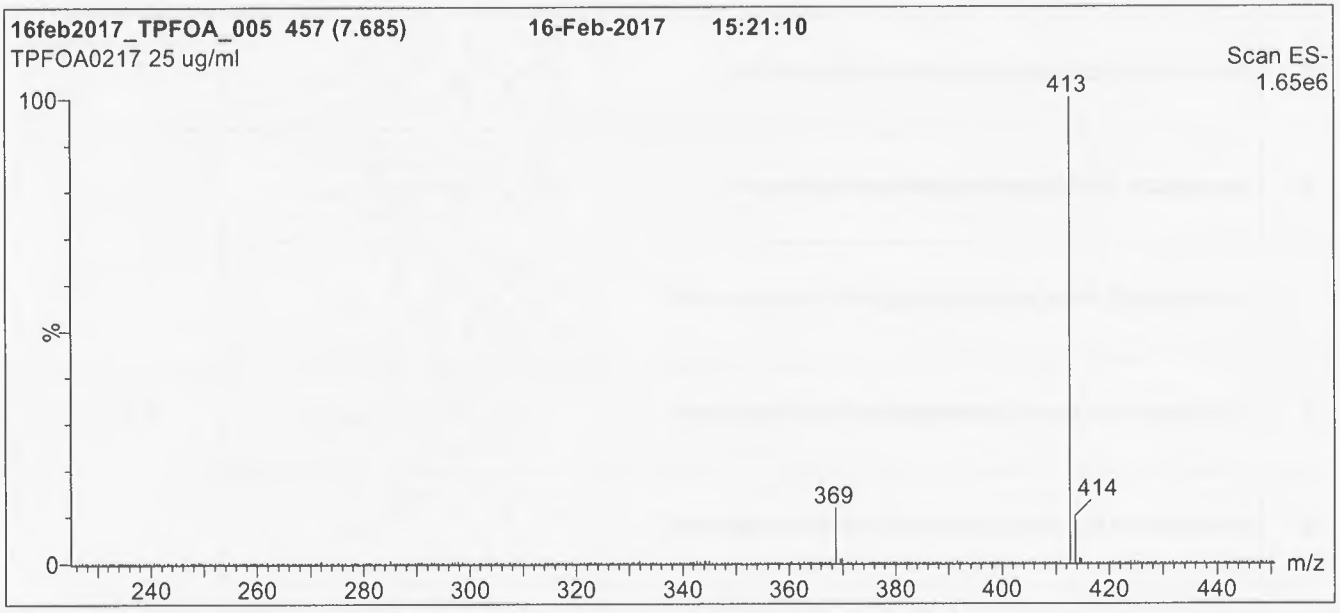
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Linear ammonium perfluoro-n-octanoate		79
2	Ammonium 6-trifluoromethylperfluoroheptanoate		9
3	Ammonium 5-trifluoromethylperfluoroheptanoate		4.5
4	Ammonium 4-trifluoromethylperfluoroheptanoate		4
5	Ammonium 3-trifluoromethylperfluoroheptanoate		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

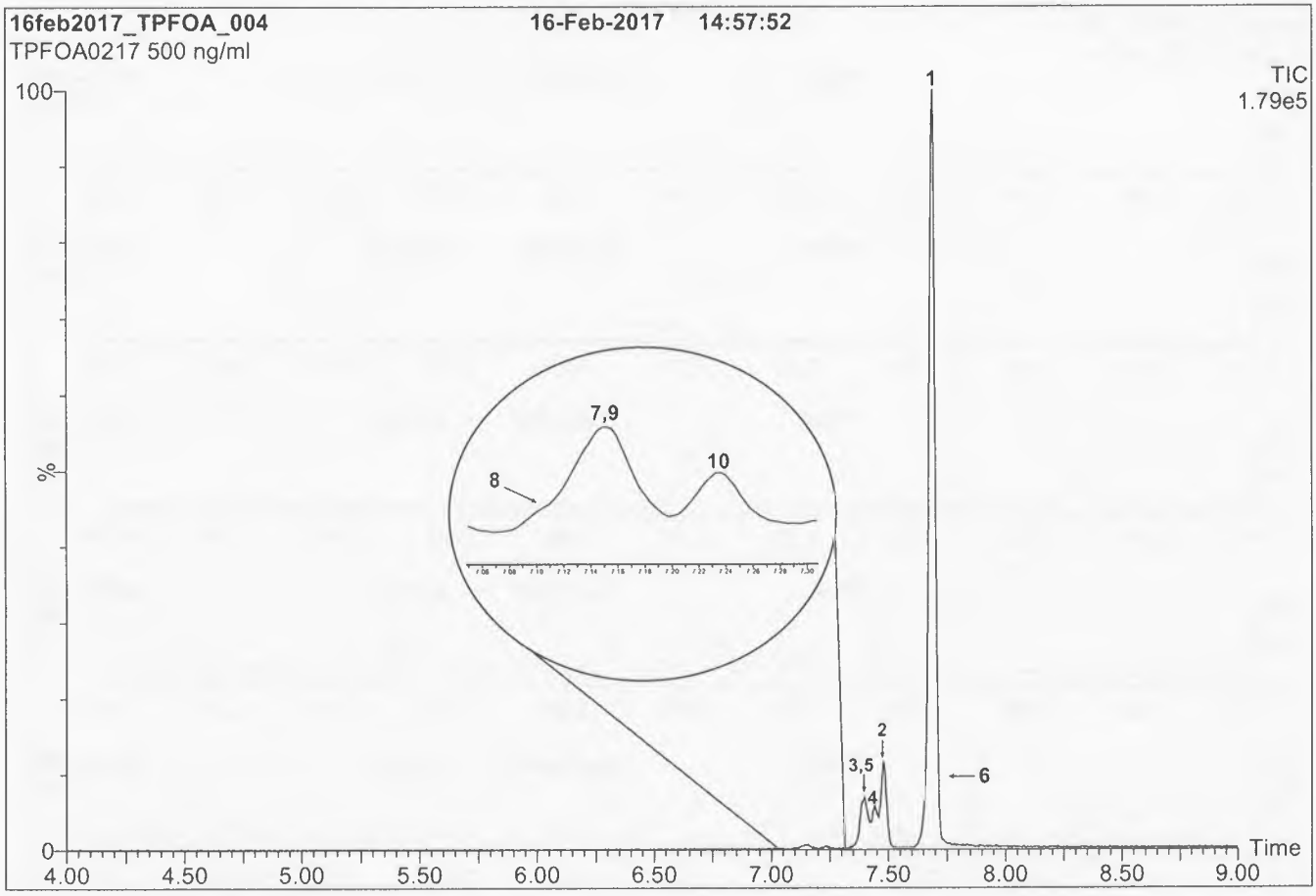
Flow: 1.0 ml/min

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

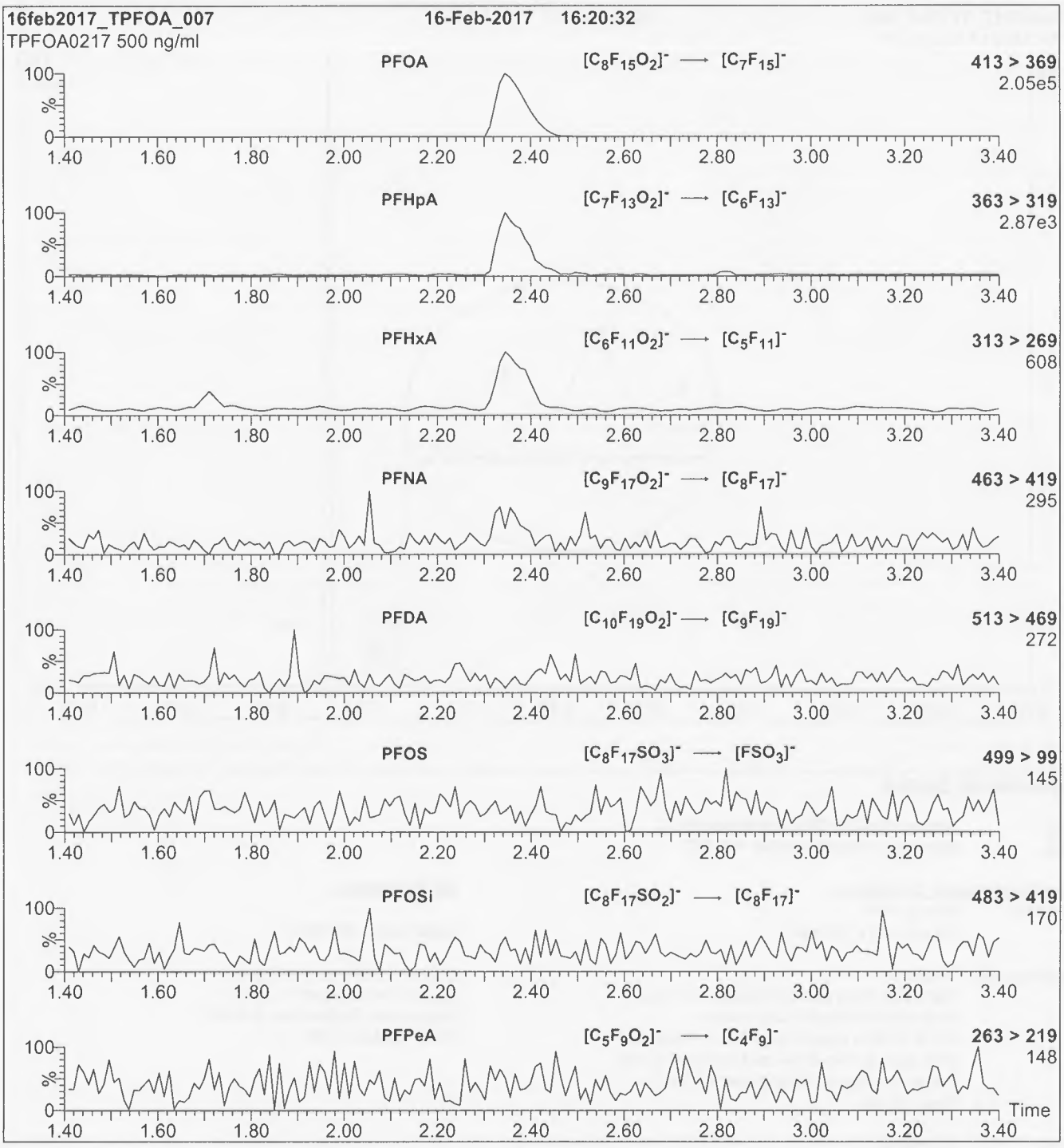
Flow: 1.0 ml/min

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)**



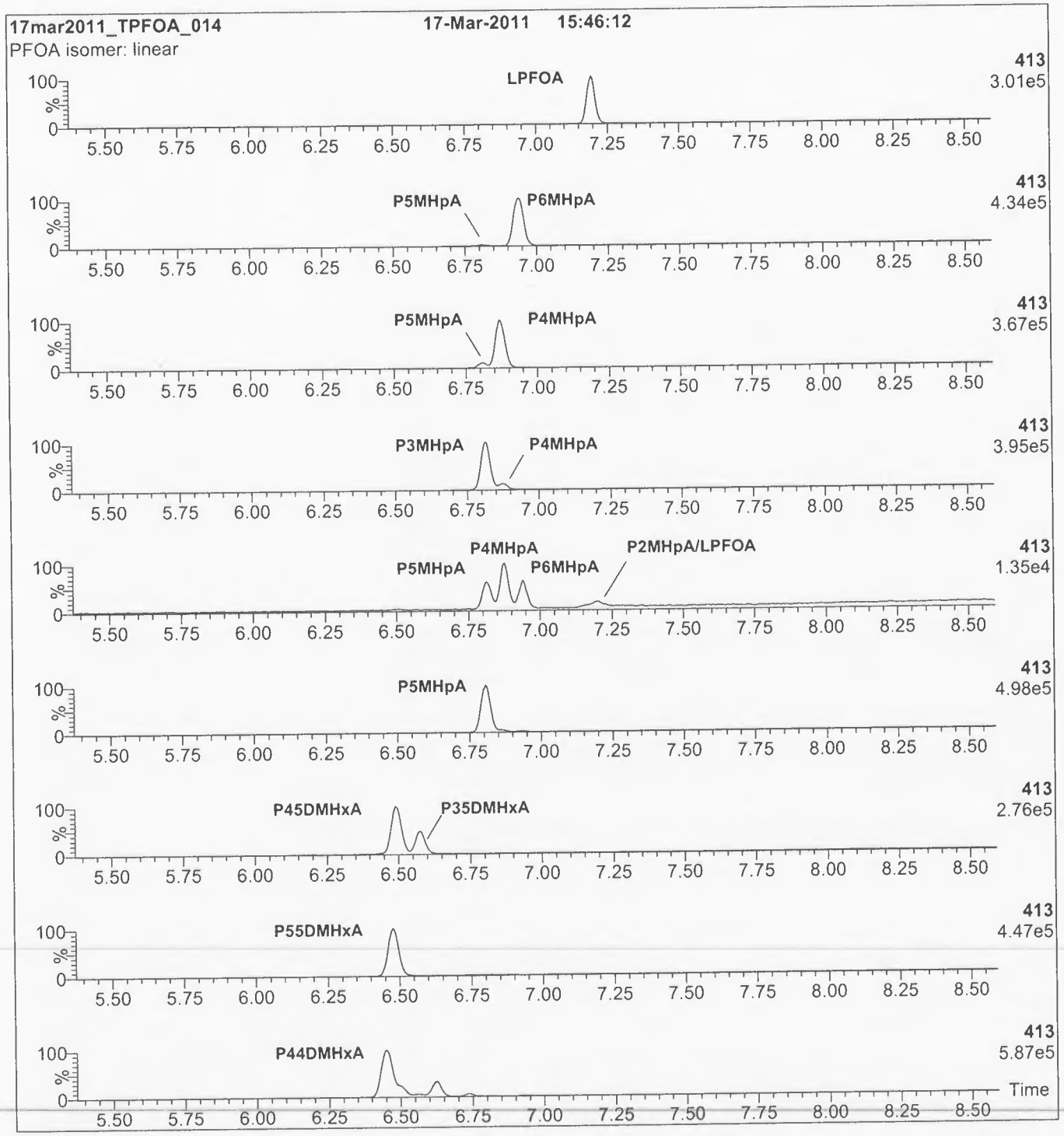
Conditions for Figure 3:

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

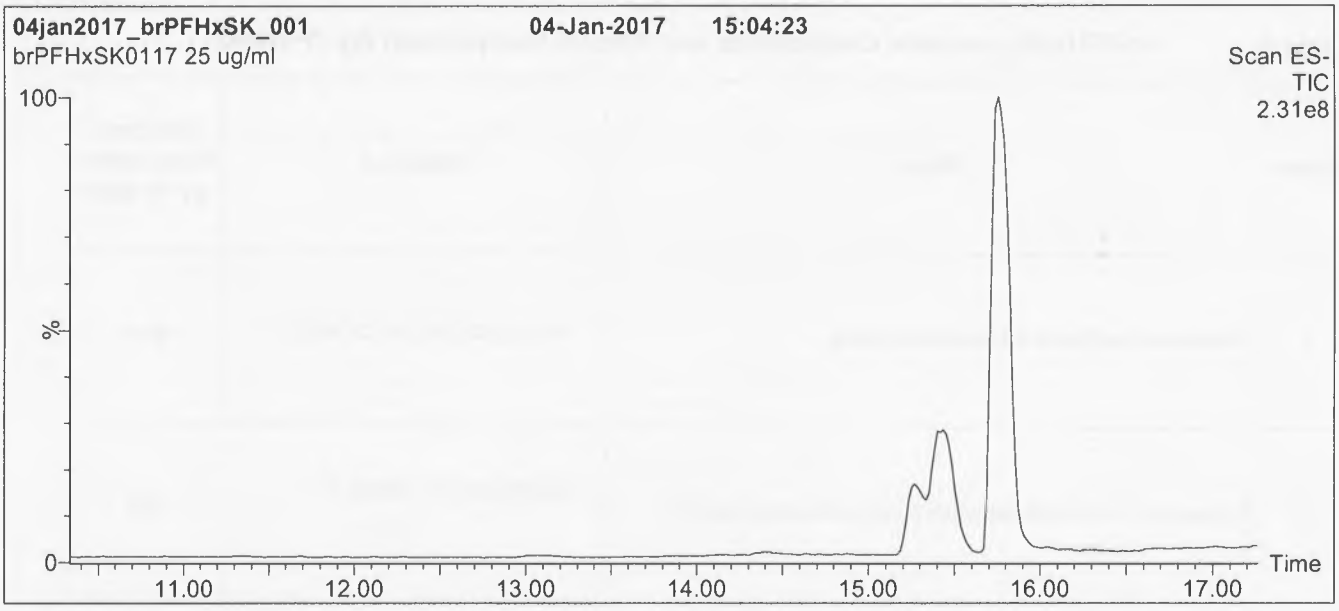
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

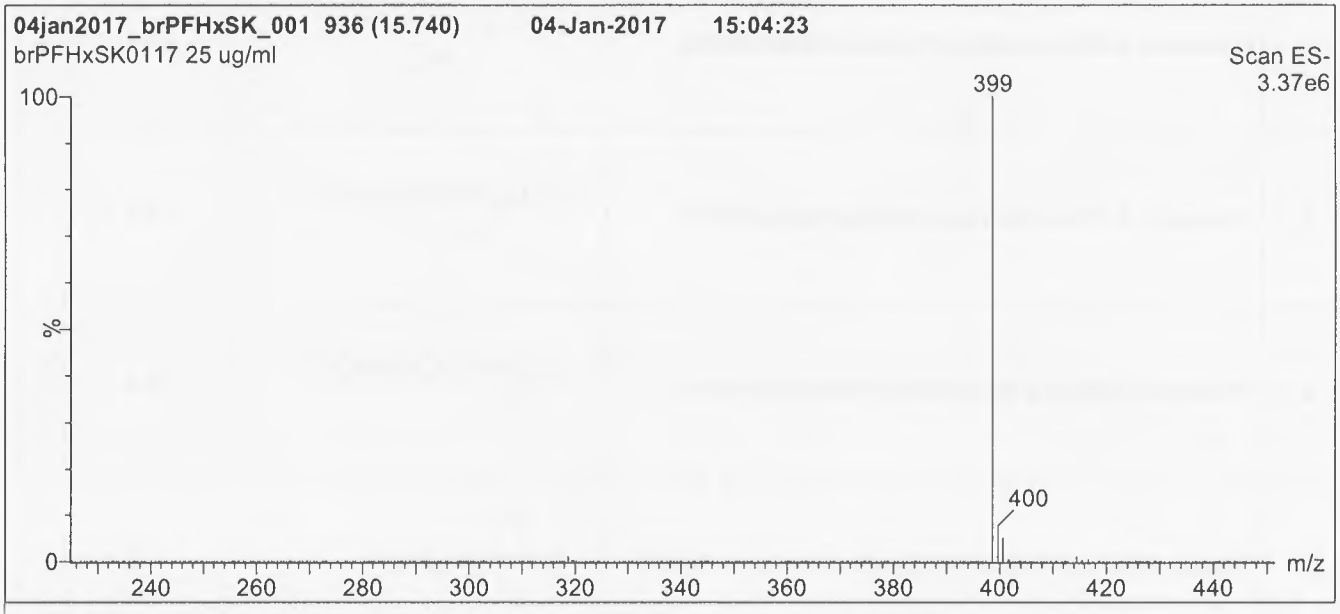
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	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

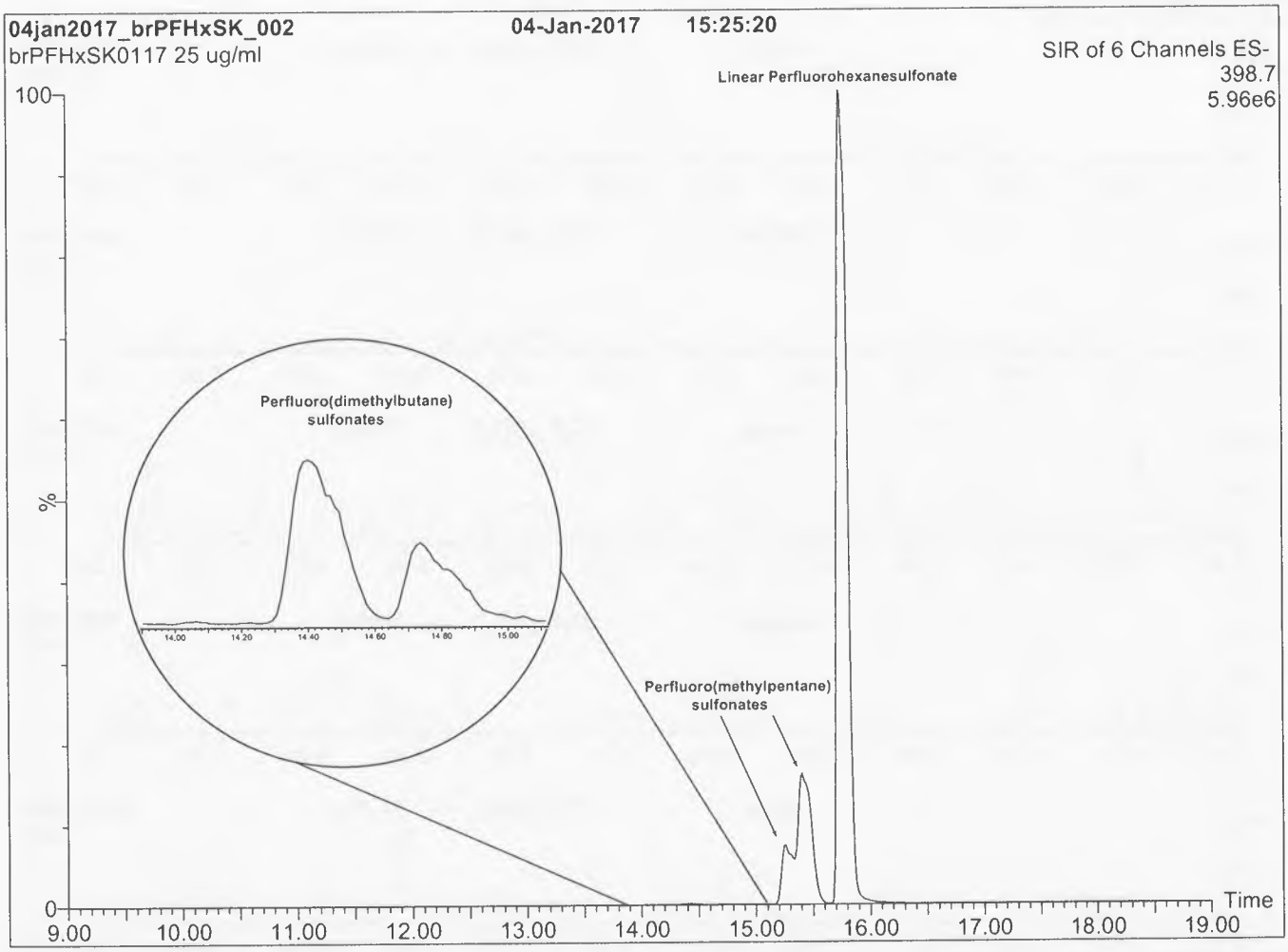
Flow: 300 µl/min

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

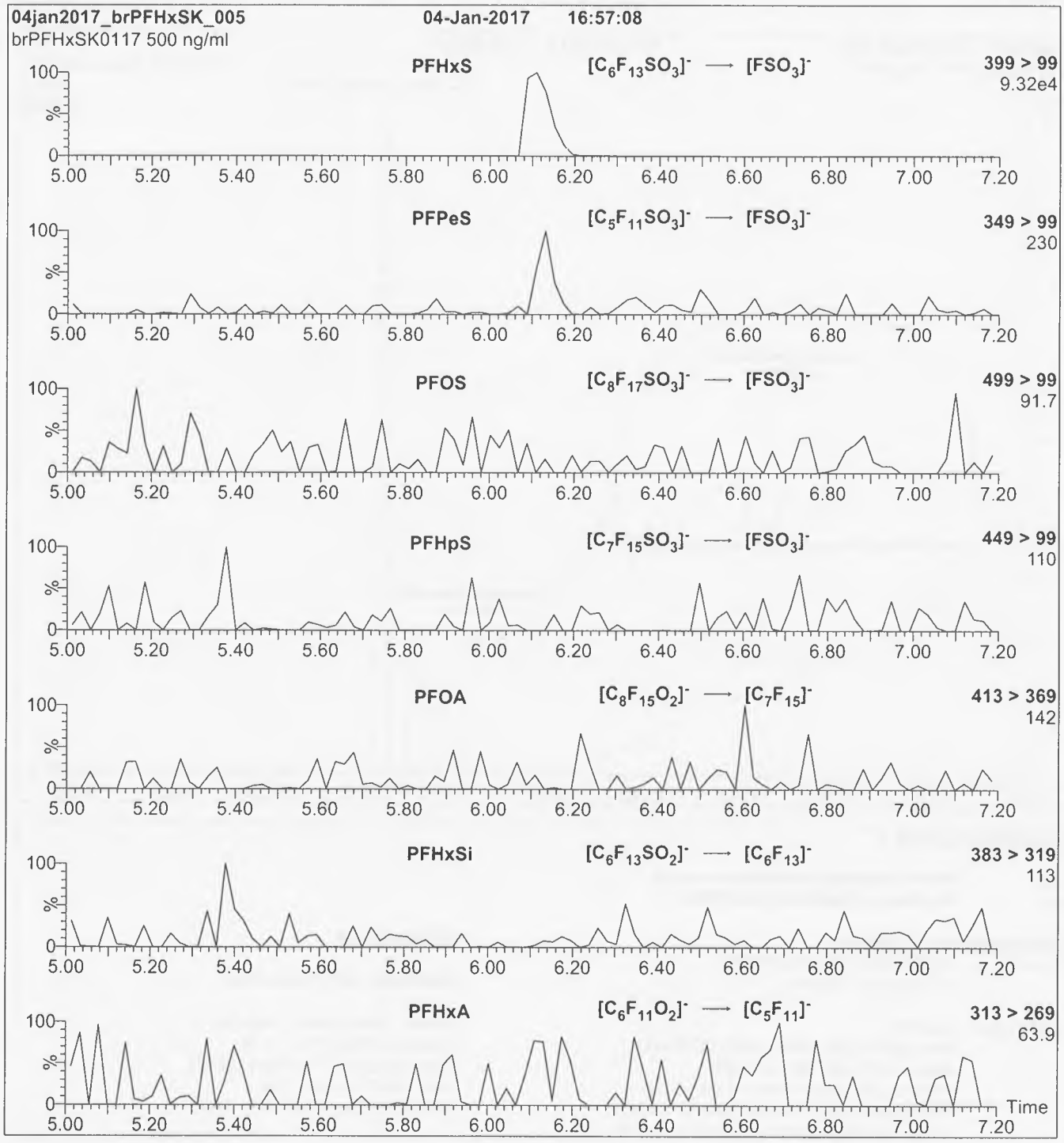
Flow: 300 µl/min

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

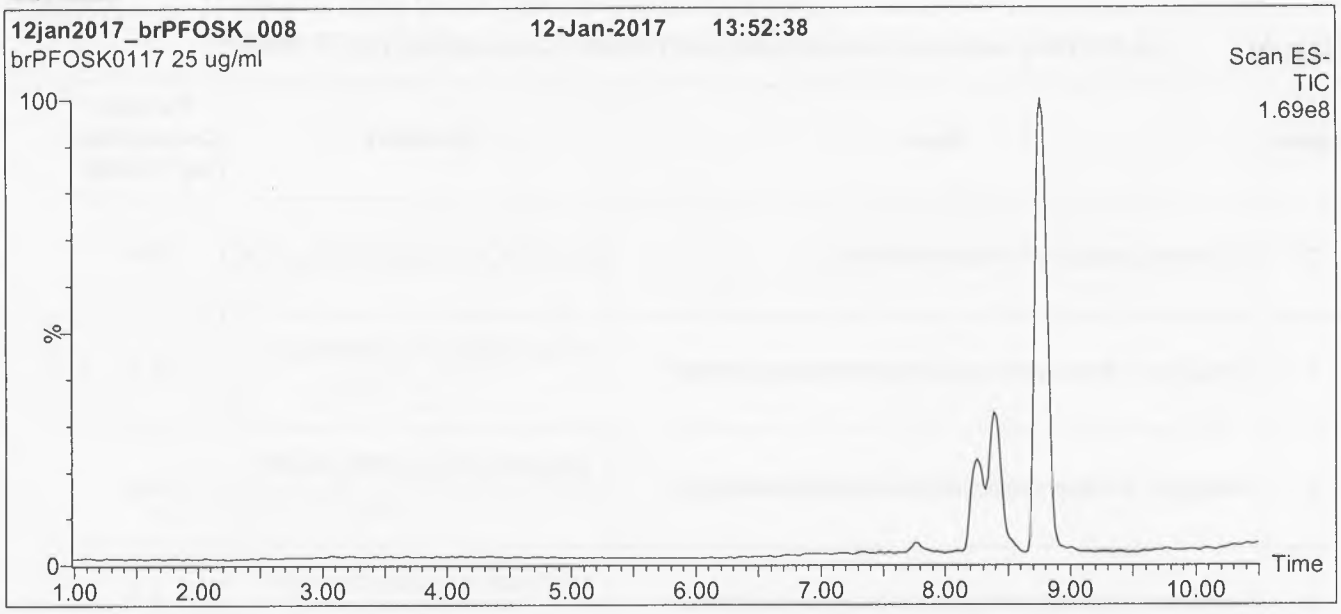
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

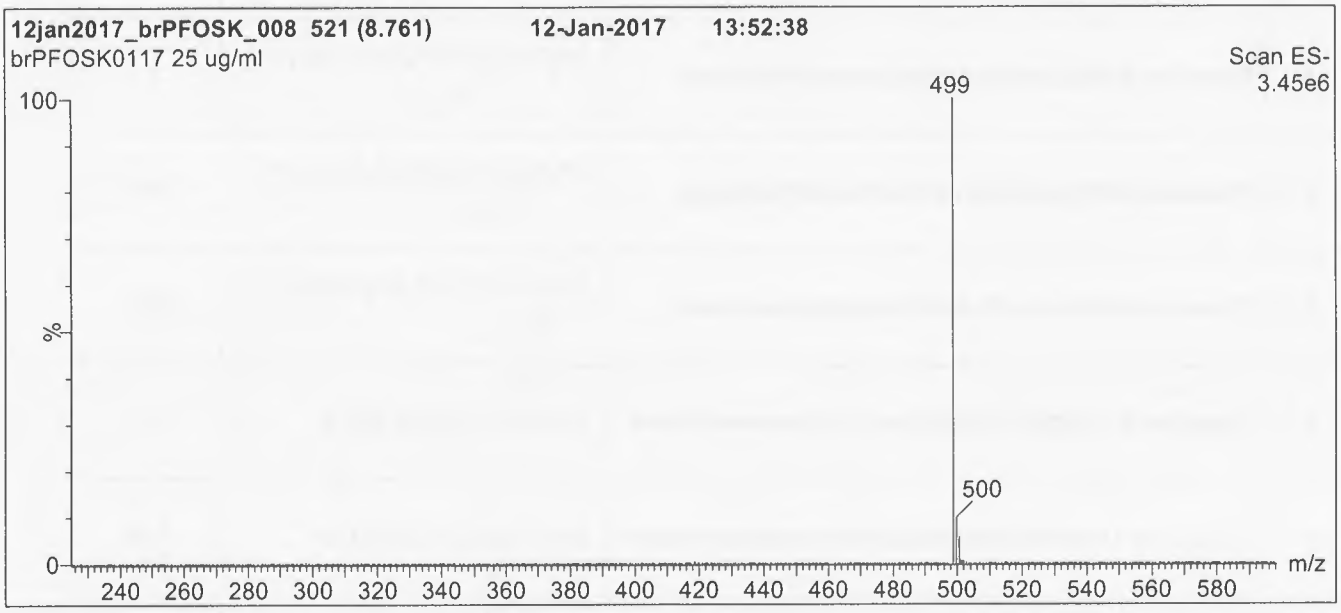
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	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

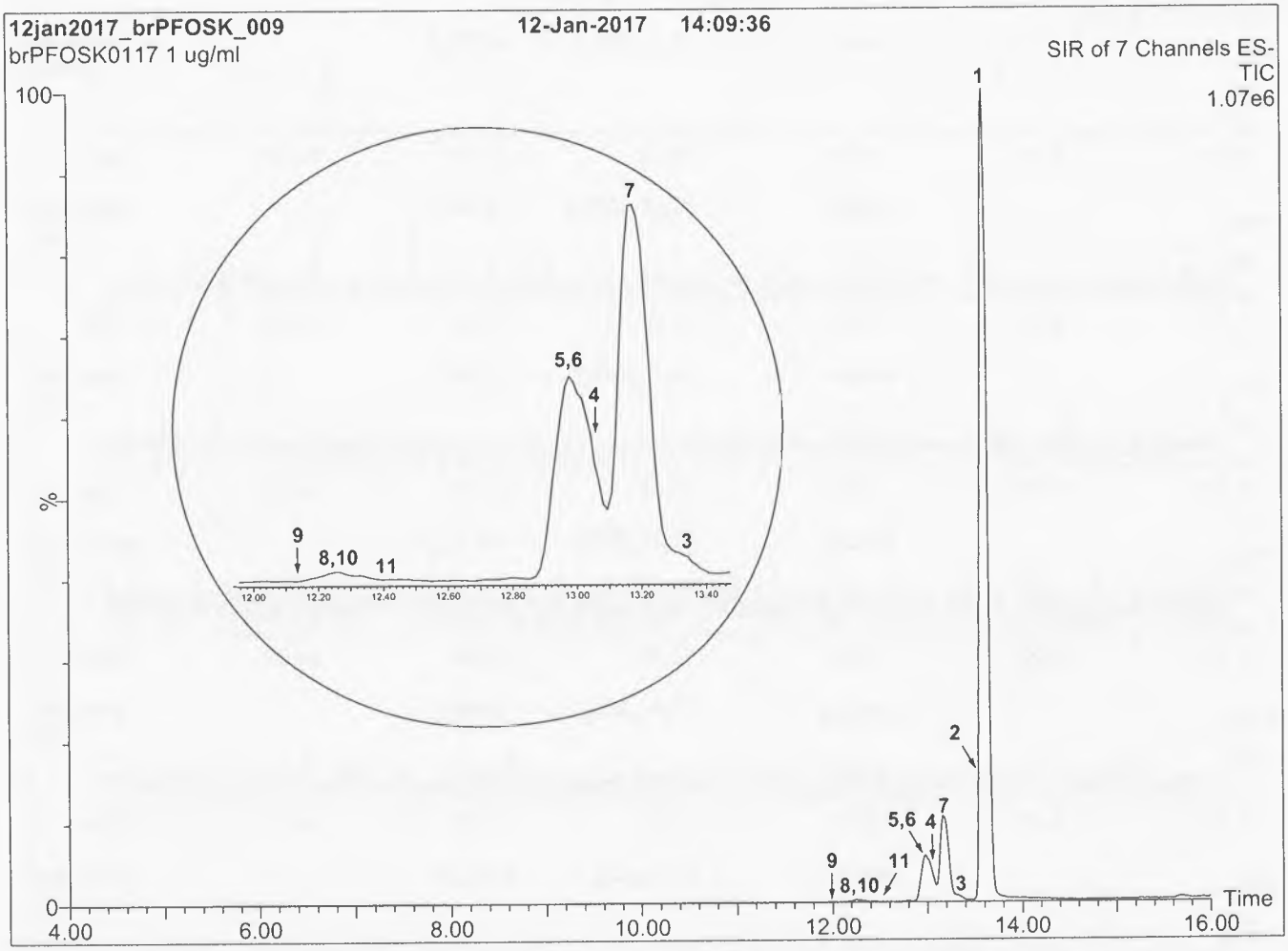
Flow: 300 µl/min

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**

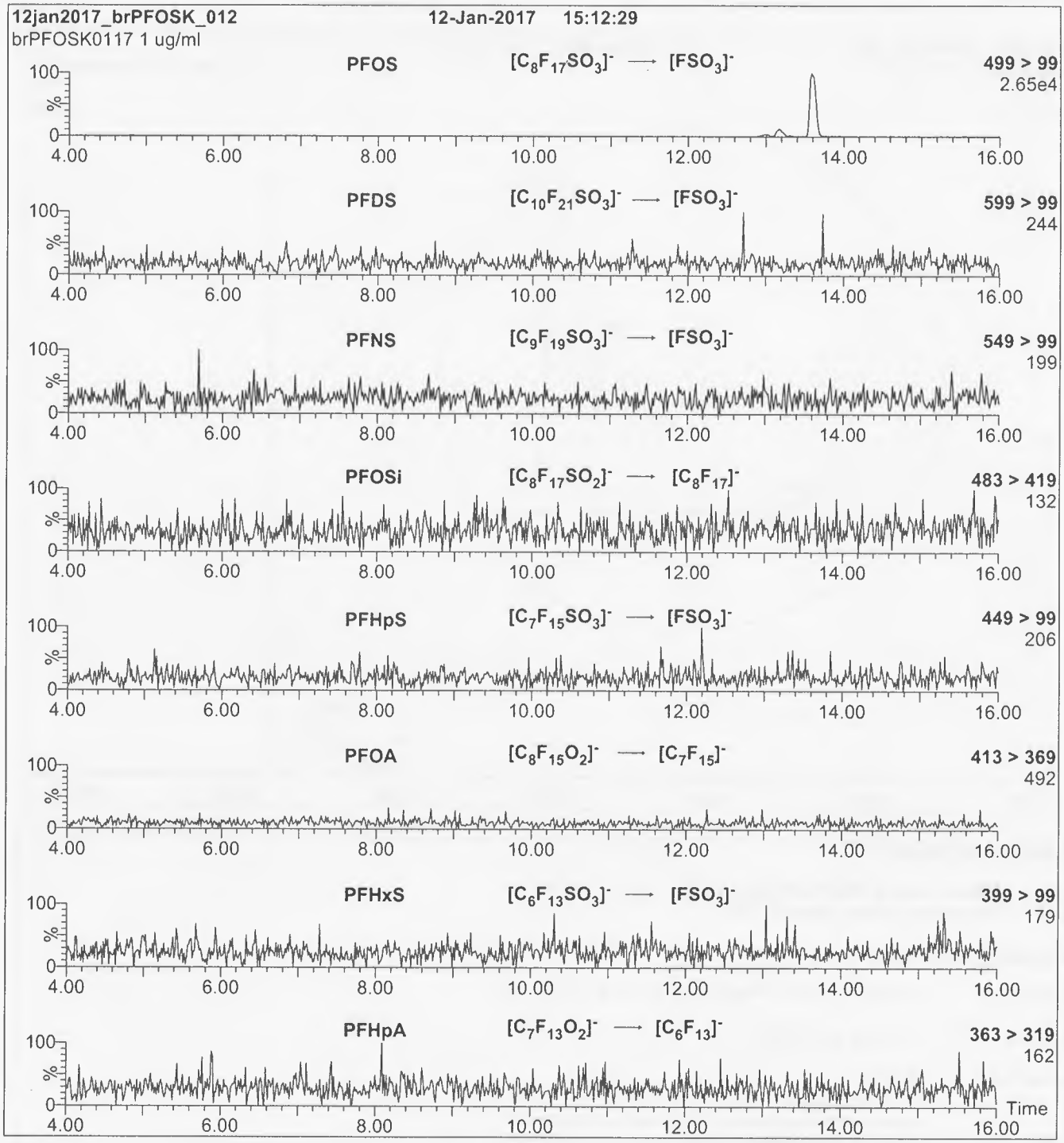
Chromatographic Conditions:

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

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

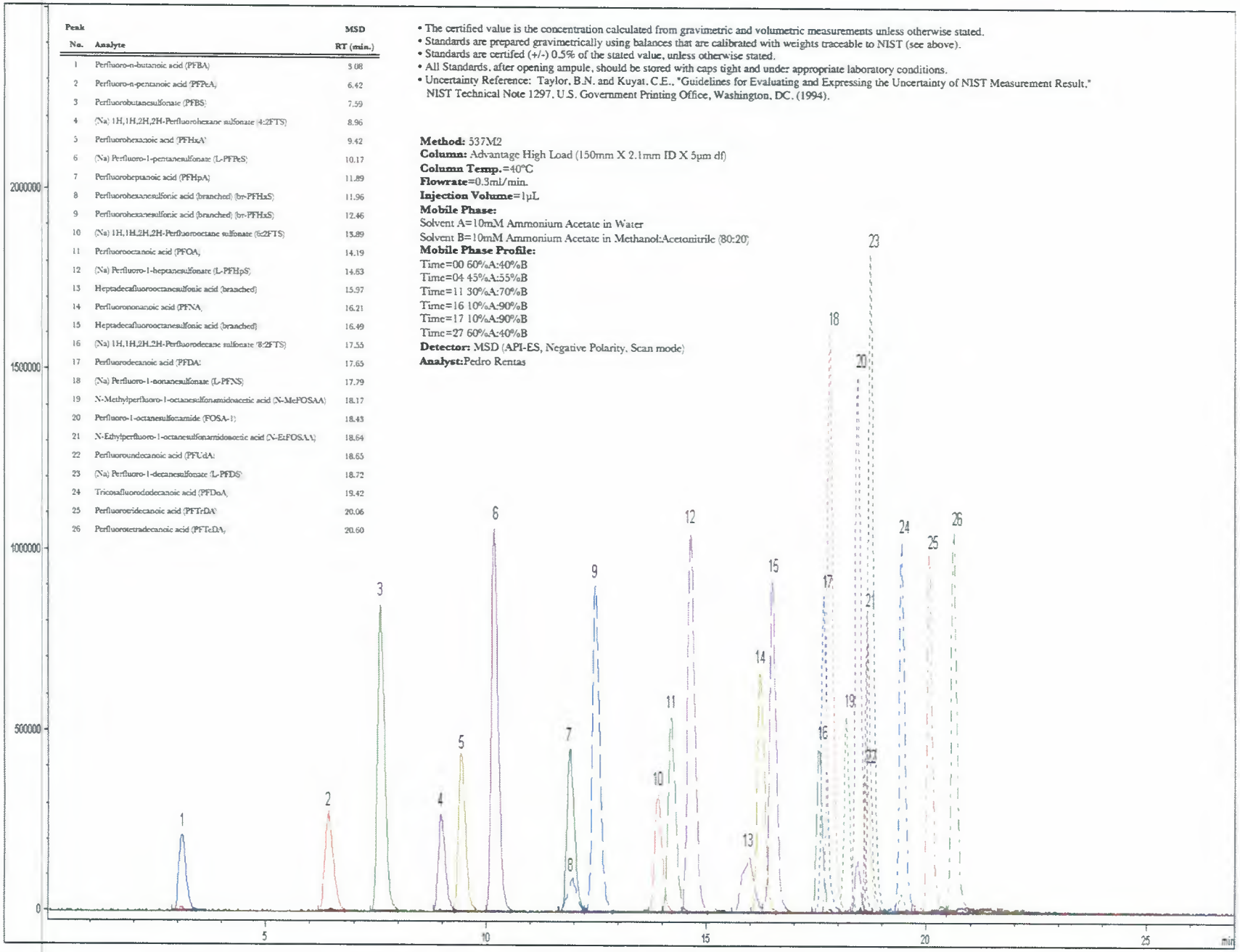
Note: All assigned values are anion concentrations.

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1.	Perfluoro-n-butanoic acid (linear)	99542	110317	0.02	1.00	0.004	50.2	1.00	0.01	375-22-4	N/A	N/A
2.	Perfluoro-n-pentanoic acid	99543	110317	0.02	1.00	0.004	50.7	1.01	0.01	2706-90-3	N/A	N/A
3.	Perfluorohexanoic acid	99199	030617	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4.	Perfluoroheptanoic acid	99197	030517	0.02	1.00	0.004	50.1	1.00	0.01	375-85-9	N/A	N/A
5.	Perfluorooctanoic acid	99202	030617	0.02	1.00	0.004	50.2	1.00	0.01	335-67-1	N/A	ipr-rat 189mg/kg
6.	Perfluorononanoic acid	99200	030617	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7.	Perfluorodecanoic acid	99195	030617	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	orl-rat 57mg/kg
8.	Perfluoroundecanoic acid	99205	030617	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9.	Tricosafluorododecanoic acid	99196	030617	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10.	Perfluorotridecanoic acid	99204	030617	0.02	1.00	0.004	50.1	1.00	0.01	72629-94-8	N/A	N/A
11.	Perfluorotetradecanoic acid	99203	030617	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12.	Perfluoro-1-octanesulfonamide	3677	FOSA0817I	0.02	1.00	0.004	50.0	1.00	0.01	754-91-6	N/A	N/A
13.	N-Methylperfluoro-1-octanesulfonamidoacetic acid	3667	NMeFOSAA0118	0.02	1.00	0.004	50.0	1.00	0.01	2355-31-9	N/A	N/A
14.	N-Ethylperfluoro-1-octanesulfonamidoacetic acid	3664	NEtFOSAA0118	0.02	1.00	0.004	50.0	1.00	0.01	2991-50-6	N/A	N/A
15.	Perfluorobutanesulfonic acid	99194	031017	0.02	1.00	0.004	50.7	1.01	0.01	375-73-5	N/A	N/A
16.	Perfluoro-1-pentanesulfonate	99544	111017	0.02	0.98	0.004	51.3	1.00	0.01	630402-22-1	N/A	N/A
17.	Perfluorohexanesulfonic acid (branched)	99198	030617	0.02	1.00	0.004	50.6	1.01	0.01	3871-99-6	N/A	N/A
18.	Perfluoro-1-heptanesulfonic acid	3672	LPFHpS0817	0.021	1.05	0.004	47.6	1.00	0.01	375-92-8	N/A	N/A
19.	Heptadecafluorooctanesulfonic acid (branched)	99201	030617	0.02	1.00	0.004	50.2	1.00	0.01	1763-23-1	N/A	N/A
20.	Perfluoro-1-nonanesulfonic acid	3957	LPFNS0917	0.021	1.05	0.004	48.0	1.01	0.01	98789-57-2	N/A	N/A
21.	Perfluoro-1-decanesulfonic acid	3671	LPFDS0217	0.021	1.05	0.004	48.2	1.01	0.01	2806-15-7	N/A	N/A
22.	1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS1216	0.0214	1.07	0.004	46.7	1.00	0.01	00-00-0	N/A	N/A
23.	1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	62FTS0616	0.021	1.05	0.004	47.4	1.00	0.01	27619-97-2	N/A	N/A
24.	1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS1216	0.021	1.05	0.004	47.9	1.01	0.01	39108-34-4	N/A	N/A

Peak No.	Analyte	MSD RT (min.)
1	Perfluoro-n-butanoic acid (PFBA)	5.08
2	Perfluoro-n-pentanoic acid (PFPeA)	6.42
3	Perfluorobutanesulfonate (PFBS)	7.59
4	(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)	8.96
5	Perfluorohexanoic acid (PFHxA)	9.42
6	(Na) Perfluoro-1-pentanesulfonate (L-PFPeS)	10.17
7	Perfluoroheptanoic acid (PFHpA)	11.89
8	Perfluorohexanesulfonic acid (branched) (br-PFHxS)	11.96
9	Perfluorohexanesulfonic acid (branched) (br-PFHxS)	12.46
10	(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)	13.89
11	Perfluorooctanoic acid (PFOA)	14.19
12	(Na) Perfluoro-1-heptanesulfonate (L-PFHpS)	14.63
13	Heptadecafluorooctanesulfonic acid (branched)	15.97
14	Perfluorononanoic acid (PFNA)	16.21
15	Heptadecafluorooctanesulfonic acid (branched)	16.49
16	(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)	17.55
17	Perfluorodecanoic acid (PFDA)	17.65
18	(Na) Perfluoro-1-nonanesulfonate (L-PFNS)	17.79
19	N-Methylperfluoro-1-octanesulfonamidoacetic acid (N-MePFOSAA)	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

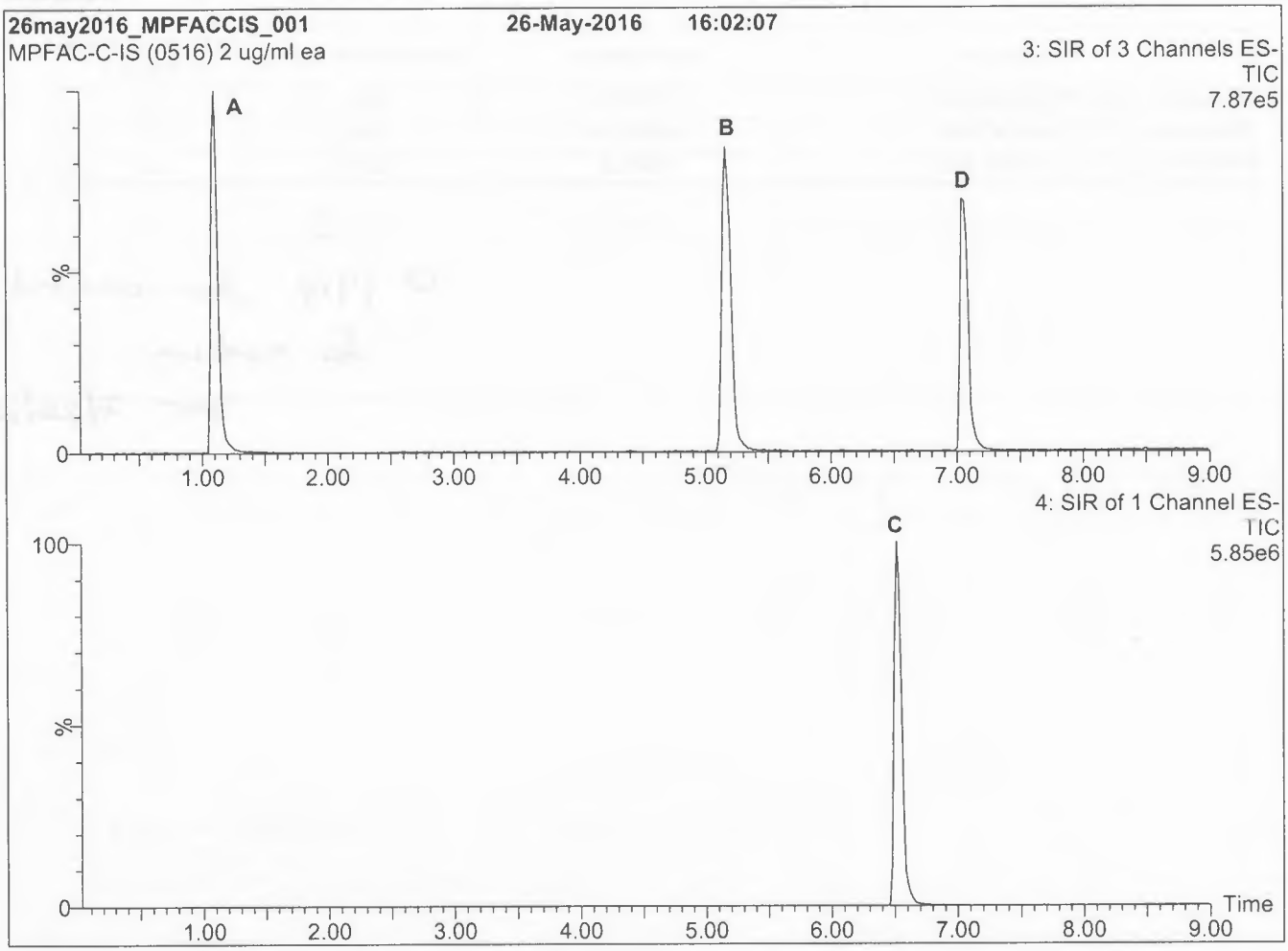
Table A: **MPFAC-C-IS; Components and Concentrations (ng/ml; ± 5% in Methanol / Water (<1%))**

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
JMS 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

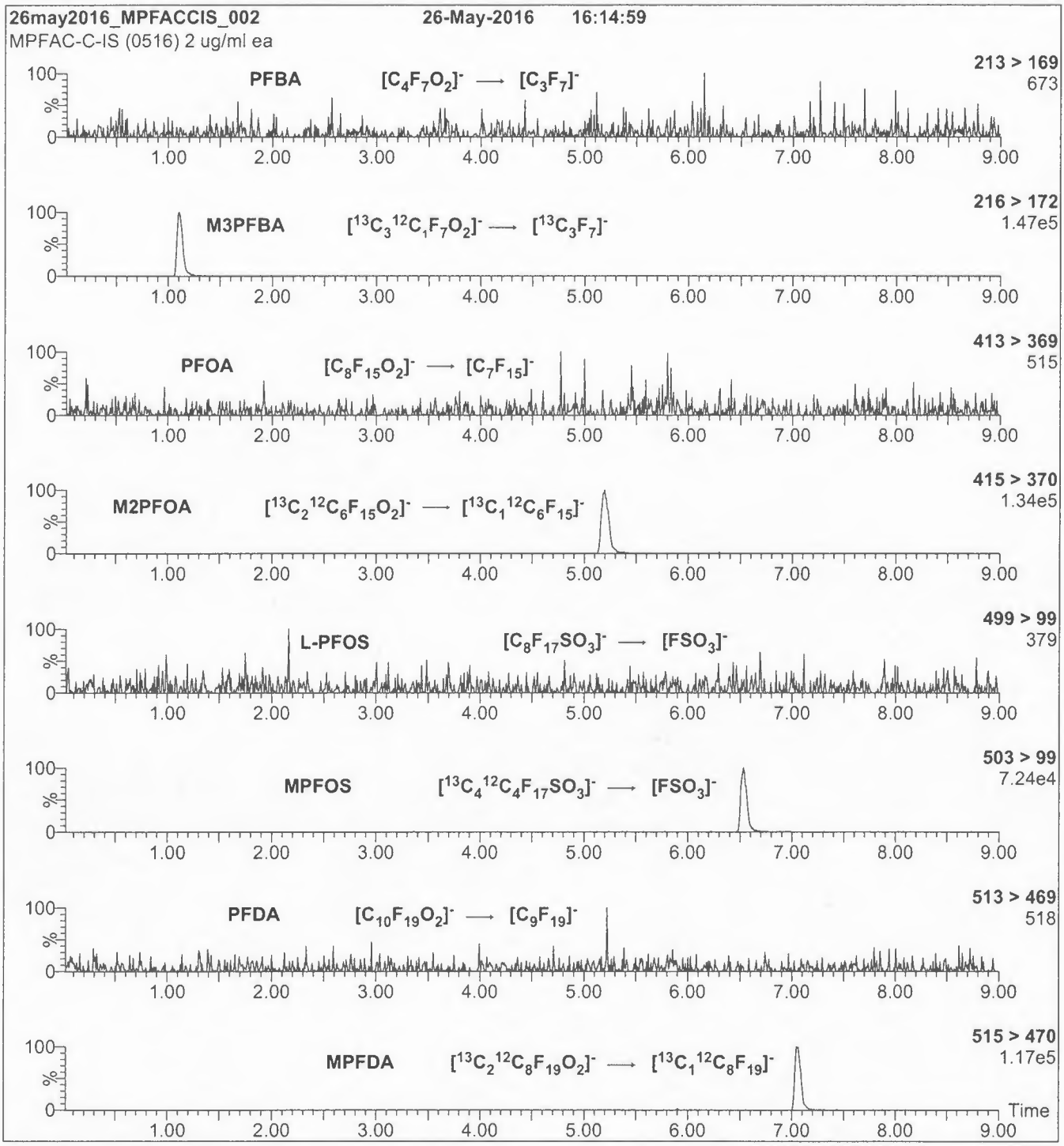
Flow: 300 µl/min

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%))**

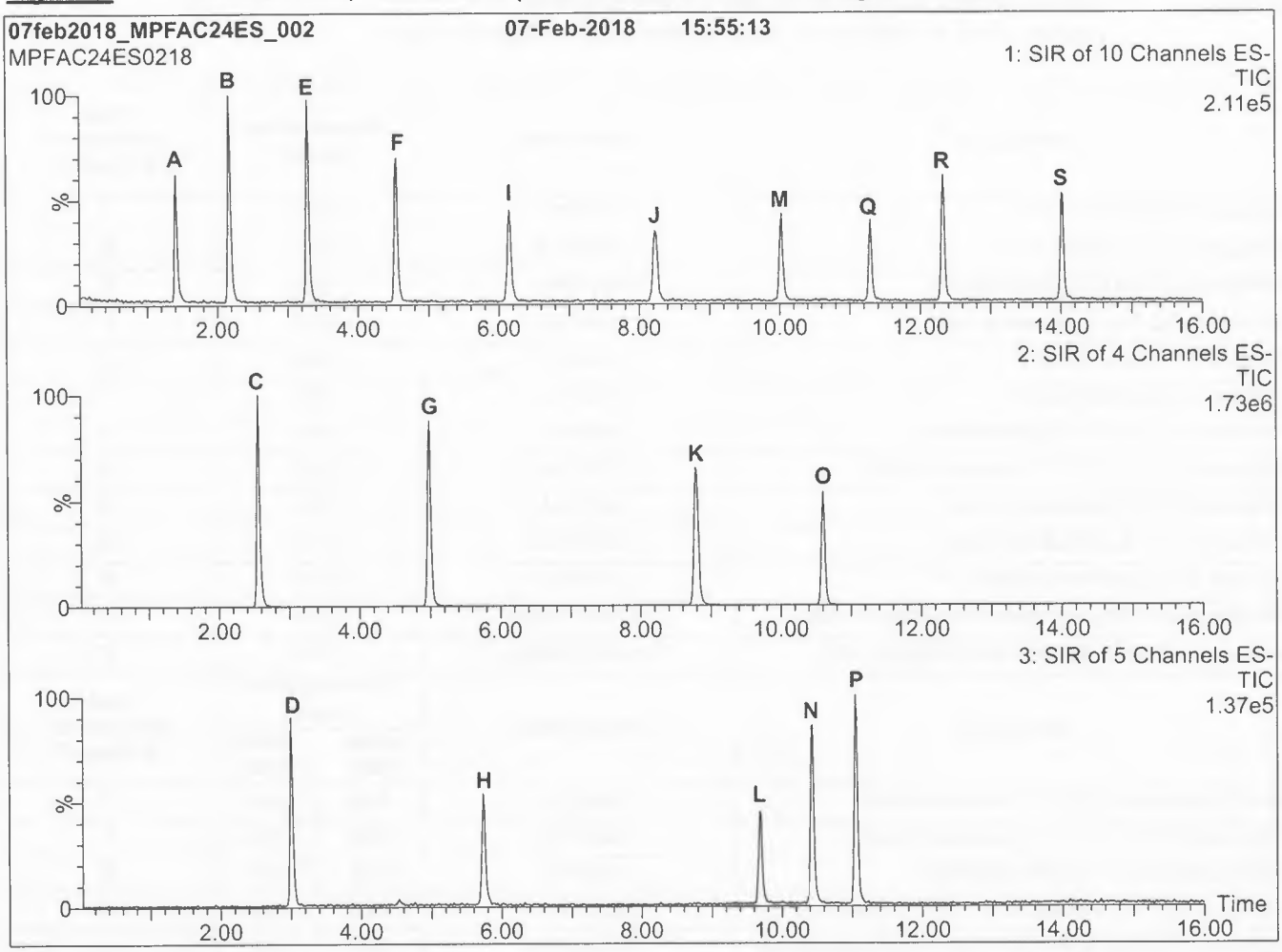
Compound	Abbreviation	Concentration (ng/ml)	Peak Assignment in Figure 1
Perfluoro-n-[$^{13}C_4$]butanoic acid	MPFBA	1000	A
Perfluoro-n-[$^{13}C_5$]pentanoic acid	M5PFPeA	1000	B
Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid	M5PFHxA	1000	E
Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid	M4PFHpA	1000	F
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)**

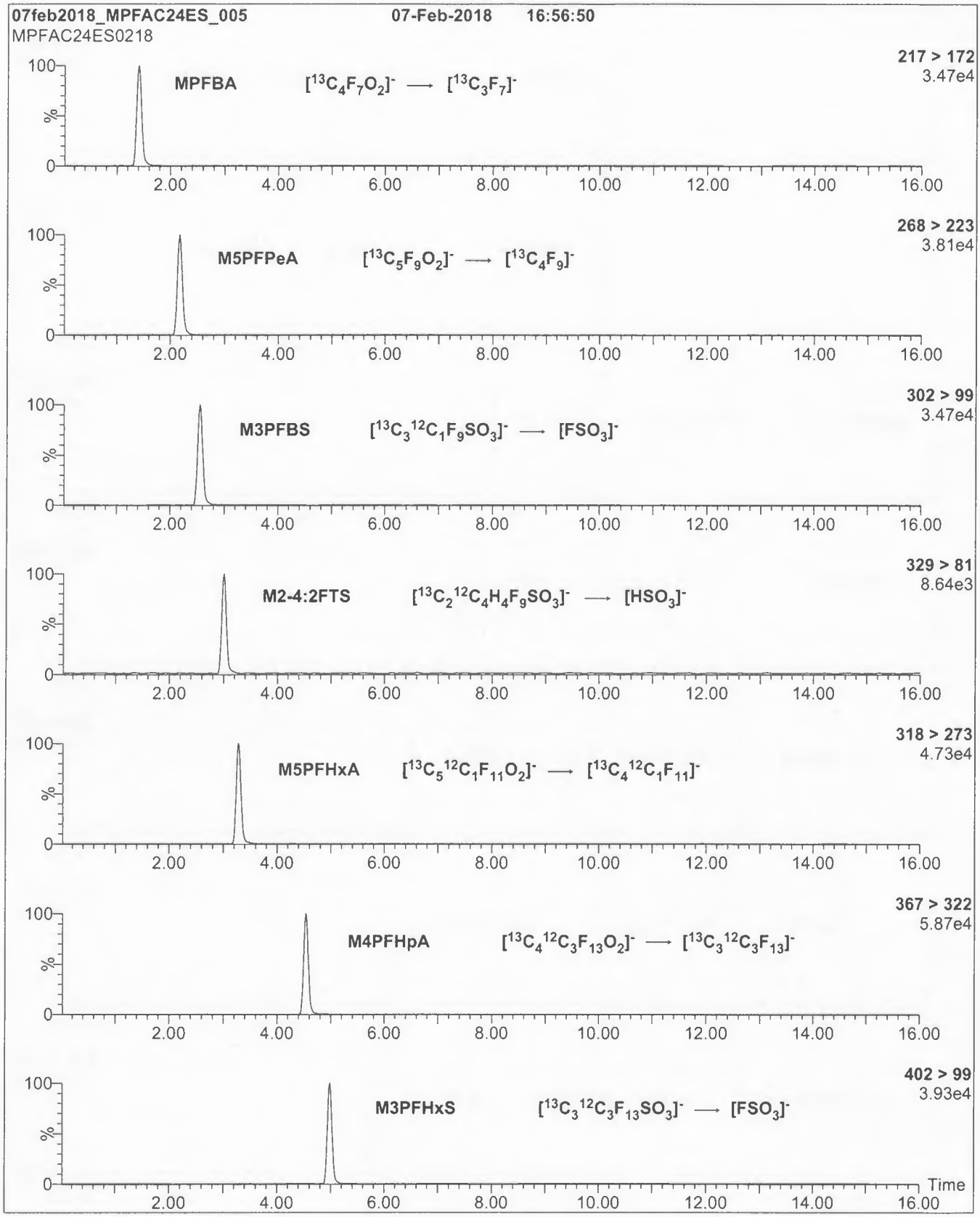


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**

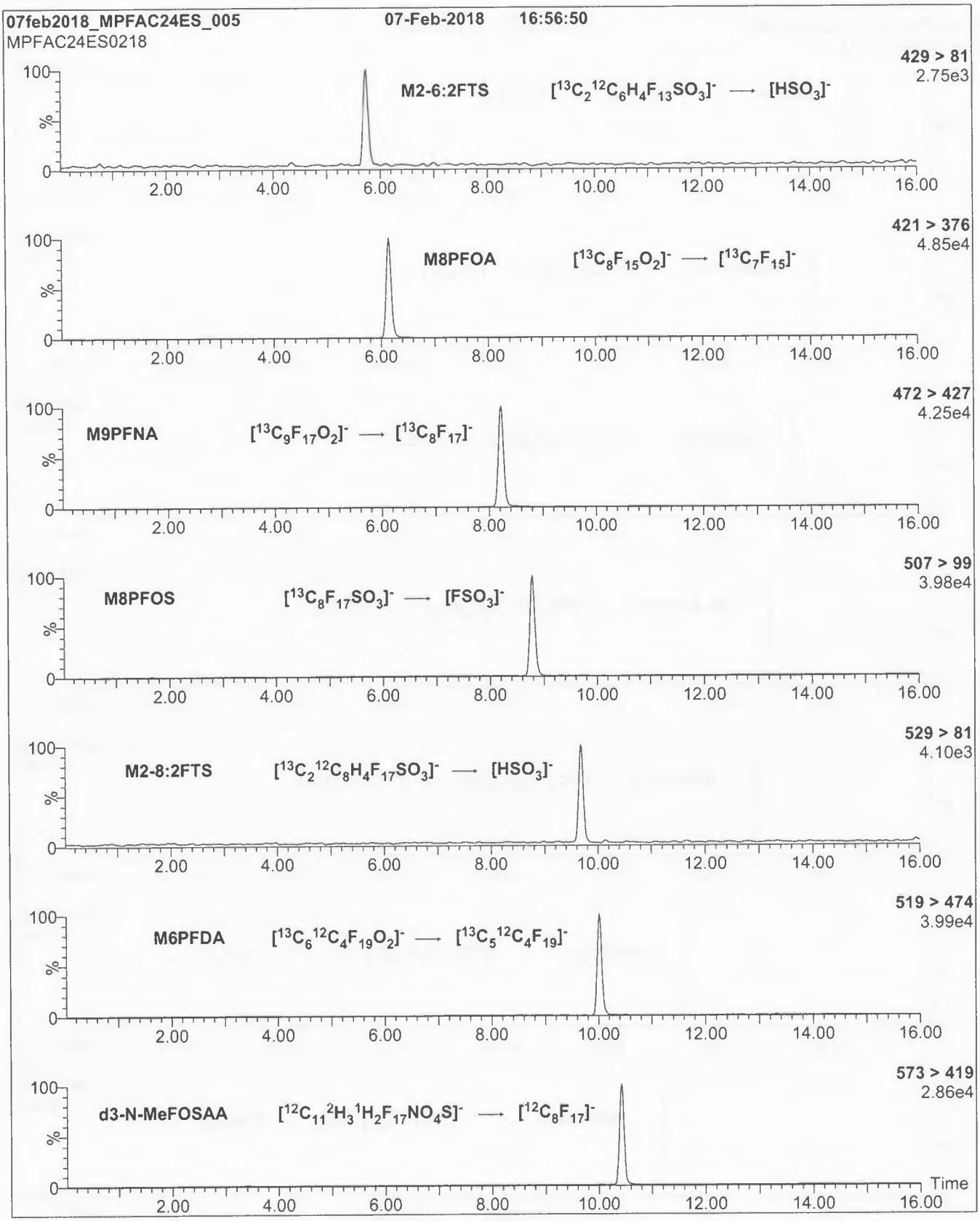
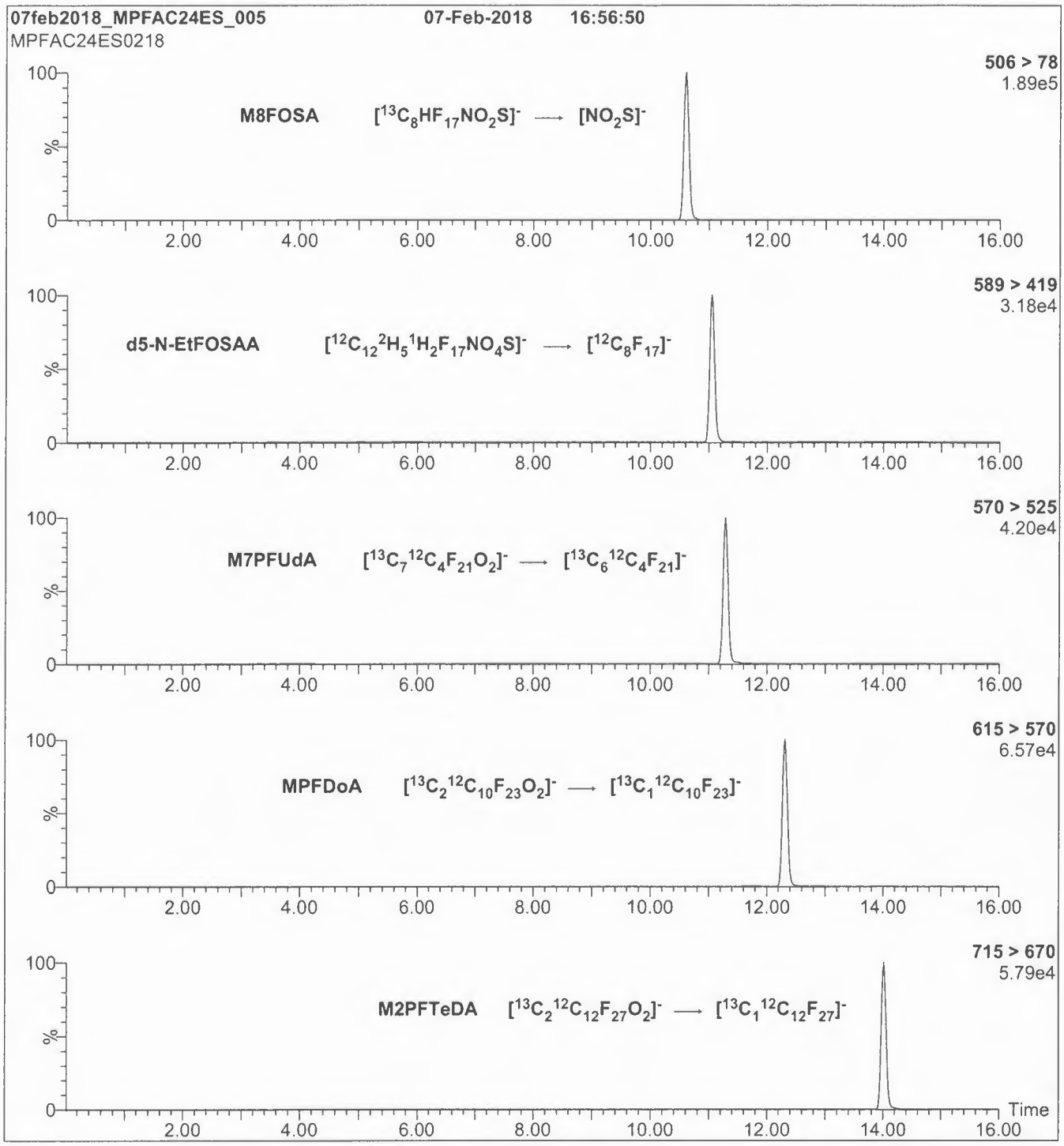


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**



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)

BATTELLE
It can be done

BDO Id: 181001-01

Reagent Receipt Report

Approved: ☐ **Authorized** ☐

Name: PFOA - 2nd source
Vendor: ABSOLUTE STANDARDS
Catalogue No: 99207
Type: Solution
Lot No: 092018
Quantity: 2 ea mL **% Moisture:**
Description: PFOA - 2nd source

Received: 10/1/2018
Custodian: Schumitz, Matt
Expires: 9/20/2023
Consumed:
Stored In: Sample Preparation - F0035

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	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	--	--	☐			1
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	1.0100	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	--	--	☐			2

Total Analytes: 24

Notes:

	Analyte:	Comment:
1	Perfluoro-1-hexanesulfonate	17 on C of A
2	Sodium perfluoro-1-pentanesulfonate	16 on C of A

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

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

181001-01

CERTIFIED WEIGHT REPORT

Part Number: 99207
Lot Number: 092018
Description: PFOA - DOD
24 components
Expiration Date: 092023
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 1.0
NIST Test ID#: 2684186

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

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

Eli Aliaga 092018
Formulated By: Eli Aliaga DATE

Pedro Rentas 092018
Reviewed By: Pedro L. Rentas DATE

Note: All assigned values are anion concentrations.

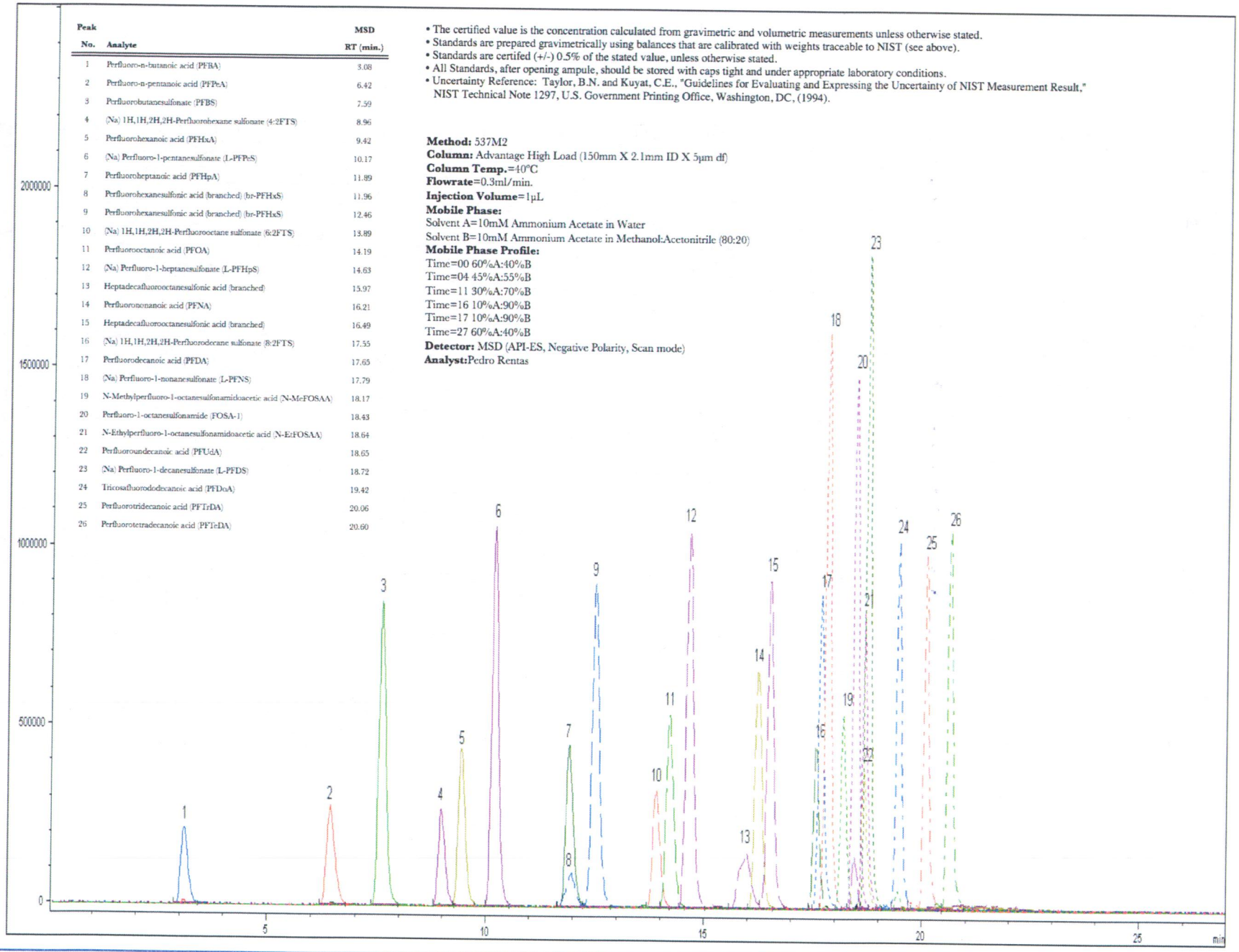
2nd Source

	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	FOSA0618I	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	LPFNS0718	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	LPFDS1117	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)	3.08
2	Perfluoro-n-pentanoic acid (PFPeA)	6.42
3	Perfluorobutanesulfonate (PFBS)	7.59
4	(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)	8.96
5	Perfluorohexanoic acid (PFHxA)	9.42
6	(Na) Perfluoro-1-pentanesulfonate (L-PFPeS)	10.17
7	Perfluoroheptanoic acid (PFHpA)	11.89
8	Perfluorohexanesulfonic acid (branched) (br-PFHxS)	11.96
9	Perfluorohexanesulfonic acid (branched) (br-PFHxS)	12.46
10	(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)	13.89
11	Perfluorooctanoic acid (PFOA)	14.19
12	(Na) Perfluoro-1-heptanesulfonate (L-PFHpS)	14.63
13	Heptadecafluorooctanesulfonic acid (branched)	15.97
14	Perfluorononanoic acid (PFNA)	16.21
15	Heptadecafluorooctanesulfonic acid (branched)	16.49
16	(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)	17.55
17	Perfluorodecanoic acid (PFDA)	17.65
18	(Na) Perfluoro-1-nonanesulfonate (L-PFNS)	17.79
19	N-Methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	18.17
20	Perfluoro-1-octanesulfonamide (FOSA-1)	18.43
21	N-Ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	18.64
22	Perfluoroundecanoic acid (PFUdA)	18.65
23	(Na) Perfluoro-1-decanesulfonate (L-PFDS)	18.72
24	Tricosafluorododecanoic acid (PFDoA)	19.42
25	Perfluorotridecanoic acid (PFTrDA)	20.06
26	Perfluorotetradecanoic acid (PFTeDA)	20.60

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

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



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

18-0610

CTO-4164: Analysis of Solids

SB, SS

SOP Numbers (see workplan for modifications)

ExtractionSOP No. 5-370

This Batch Contains The Following Samples:		
CR988PB-FS	J8662-FS	J8672-FS
CR989LCS-FS	J8663-FS	J8673-FS
J8658-FS	J8664-FS	J8674-FS
J8659-FS	J8665-FS	J8675-FS
J8660-FS	J8666-FS	J8676-FS
J8661-FS	J8671-FS	

Laboratory Preparation Records
COMPLETE AND VALIDATED

Prep Task Leader: Stephanie Schultz

Approved By:	Date	Initials
Denise Schumitz	10/24/2018	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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Sample ID	Description
CR988PB-FS	Procedural Blank - Ottawa Sand (180507-02)
CR989LCS-FS	Laboratory Control Sample - Ottawa Sand (180507-02)
J8658-FS	VC-CS12-SS01-000H
J8659-FS	VC-CS12-SB01-0102
J8660-FS	VC-CS12-SB01-0506
J8661-FS	VC-CS12-SS02-000H
J8662-FS	VC-CS12-SB02-0102
J8663-FS	VC-CS12-SB02-0506
J8664-FS	VC-CS12-SS03-000H
J8665-FS	VC-CS12-SB03-0102
J8666-FS	VC-CS12-SB03-0506
J8671-FS	VC-CS10-SS01-000H
J8672-FS	VC-CS10-SB01-0102
J8673-FS	VC-CS10-SB01-0506
J8674-FS	VC-CS10-SS02-000H
J8675-FS	VC-CS10-SB02-0102
J8676-FS	VC-CS10-SB02-0506

Samples Assigned By: Jonathan Thorn Date : October 9, 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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Requested On/By:	10/10/2018 KB	**Purpose:**	Sample Preparation
Relinquished On/By:	10/10/2018 MDS	**Last Activity:**	Return

Accepted On/By:	10/10/2018 KB	**Returned On/To:**	10/10/2018 MDS
Stored In Facility:	Sample Preparation	**Returned To Facility:**	Custody: NA
Stored Until	10/10/2018		
Stored Comment:	NA	**Returned Comment:**	NA

No.	BDO-ID:	Ctrs	*	Condition:	Custody Comment:
1	J8658	1	--	Intact	NA
2	J8659	1	--	Intact	NA
3	J8660	1	--	Intact	NA
4	J8661	1	--	Intact	NA
5	J8662	1	--	Intact	NA
6	J8663	1	--	Intact	NA
7	J8664	1	--	Intact	NA
8	J8665	1	--	Intact	NA
9	J8666	1	--	Intact	NA
10	J8671	1	--	Intact	NA
11	J8672	1	--	Intact	NA
12	J8673	1	--	Intact	NA
13	J8674	1	--	Intact	NA
14	J8675	1	--	Intact	NA
15	J8676	1	--	Intact	NA

Total Samples 15 * "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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Sample ID:	Ctrs.	*	Tare Wt. (g)	Aliquot Wt. (g)	Dry Wt. (g)	Sample Wet Wt. (g)	% Dry Wt.	% Moisture	Sample Dry Wt. (g)
CR988PB-FS	NA	--	NA	NA	NA	2.09	100.00	0.00	2.09
CR989LCS-FS	NA	--	NA	NA	NA	2.10	100.00	0.00	2.10
J8658-FS	1	--	1.07	6.61	6.50	2.04	98.01	1.99	2.00
J8659-FS	1	--	1.08	6.42	6.12	1.97	94.38	5.62	1.86
J8660-FS	1	--	1.08	5.84	4.63	2.22	74.58	25.42	1.66
J8661-FS	1	--	1.12	7.55	7.45	2.01	98.44	1.56	1.98
J8662-FS	1	--	1.08	7.12	6.64	2.03	92.05	7.95	1.87
J8663-FS	1	--	1.08	6.25	4.51	2.05	66.34	33.66	1.36
J8664-FS	1	--	1.11	7.06	6.93	1.96	97.82	2.18	1.92
J8665-FS	1	--	1.06	6.23	5.86	2.02	92.84	7.16	1.88
J8666-FS	1	--	1.12	7.13	4.88	2.05	62.56	37.44	1.28
J8671-FS	1	--	1.09	6.63	6.56	1.96	98.74	1.26	1.94
J8672-FS	1	--	1.11	6.68	6.54	1.99	97.49	2.51	1.94
J8673-FS	1	--	1.11	6.10	5.10	1.96	79.96	20.04	1.57
J8674-FS	1	--	1.11	6.37	6.28	1.99	98.29	1.71	1.96
J8675-FS	1	--	1.08	6.97	6.91	1.98	98.98	1.02	1.96
J8676-FS	1	--	1.07	6.52	5.41	1.95	79.63	20.37	1.55

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

18-0610

CTO-4164: Analysis of Solids

SB, SS

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:
CR988PB-FS	10/11/2018 KB	BAL-015
CR989LCS-FS	10/11/2018 KB	BAL-015
J8658-FS	10/10/2018 KB	BAL-015
J8659-FS	10/10/2018 KB	BAL-015
J8660-FS	10/10/2018 KB	BAL-015
J8661-FS	10/10/2018 KB	BAL-015
J8662-FS	10/10/2018 KB	BAL-015
J8663-FS	10/10/2018 KB	BAL-015
J8664-FS	10/10/2018 KB	BAL-015
J8665-FS	10/10/2018 KB	BAL-015
J8666-FS	10/10/2018 KB	BAL-015
J8671-FS	10/10/2018 KB	BAL-015
J8672-FS	10/10/2018 KB	BAL-015
J8673-FS	10/10/2018 KB	BAL-015
J8674-FS	10/10/2018 KB	BAL-015
J8675-FS	10/10/2018 KB	BAL-015
J8676-FS	10/10/2018 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

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

18-0610

CTO-4164: Analysis of Solids

SB, SS

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:
CR988PB-FS	--	--
CR989LCS-FS	--	--
J8658-FS	10/10/2018 KB	BAL-015
J8659-FS	10/10/2018 KB	BAL-015
J8660-FS	10/10/2018 KB	BAL-015
J8661-FS	10/10/2018 KB	BAL-015
J8662-FS	10/10/2018 KB	BAL-015
J8663-FS	10/10/2018 KB	BAL-015
J8664-FS	10/10/2018 KB	BAL-015
J8665-FS	10/10/2018 KB	BAL-015
J8666-FS	10/10/2018 KB	BAL-015
J8671-FS	10/10/2018 KB	BAL-015
J8672-FS	10/10/2018 KB	BAL-015
J8673-FS	10/10/2018 KB	BAL-015
J8674-FS	10/10/2018 KB	BAL-015
J8675-FS	10/10/2018 KB	BAL-015
J8676-FS	10/10/2018 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
ELECTRONIC DRY WEIGHT DETERMINATION

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0610

CTO-4164: Analysis of Solids

SB, SS

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:
CR988PB-FS	--	--
CR989LCS-FS	--	--
J8658-FS	10/10/2018 KB	BAL-015
J8659-FS	10/10/2018 KB	BAL-015
J8660-FS	10/10/2018 KB	BAL-015
J8661-FS	10/10/2018 KB	BAL-015
J8662-FS	10/10/2018 KB	BAL-015
J8663-FS	10/10/2018 KB	BAL-015
J8664-FS	10/10/2018 KB	BAL-015
J8665-FS	10/10/2018 KB	BAL-015
J8666-FS	10/10/2018 KB	BAL-015
J8671-FS	10/10/2018 KB	BAL-015
J8672-FS	10/10/2018 KB	BAL-015
J8673-FS	10/10/2018 KB	BAL-015
J8674-FS	10/10/2018 KB	BAL-015
J8675-FS	10/10/2018 KB	BAL-015
J8676-FS	10/10/2018 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
ELECTRONIC DRY WEIGHT DETERMINATION

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0610

CTO-4164: Analysis of Solids

SB, SS

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:
CR988PB-FS	--	--
CR989LCS-FS	--	--
J8658-FS	10/11/2018 KB	BAL-015
J8659-FS	10/11/2018 KB	BAL-015
J8660-FS	10/11/2018 KB	BAL-015
J8661-FS	10/11/2018 KB	BAL-015
J8662-FS	10/11/2018 KB	BAL-015
J8663-FS	10/11/2018 KB	BAL-015
J8664-FS	10/11/2018 KB	BAL-015
J8665-FS	10/11/2018 KB	BAL-015
J8666-FS	10/11/2018 KB	BAL-015
J8671-FS	10/11/2018 KB	BAL-015
J8672-FS	10/11/2018 KB	BAL-015
J8673-FS	10/11/2018 KB	BAL-015
J8674-FS	10/11/2018 KB	BAL-015
J8675-FS	10/11/2018 KB	BAL-015
J8676-FS	10/11/2018 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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Sample ID	Standard ID	Type	Vial No.	Vol Added (uL)	Date Spiked/ Spiked By	Witn'd By	Comment
CR988PB-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
CR989LCS-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
CR989LCS-FS	KC02	LCS/MS	1	100	10/11/18 KB	JRT	NA
J8658-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8659-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8660-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8661-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8662-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8663-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8664-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8665-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8666-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8671-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8672-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8673-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8674-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8675-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA
J8676-FS	KB71	SIS	1	50	10/11/18 KB	JRT	NA

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KB71	Pipette	B814659662
KC02	Pipette	B814659662

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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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CR988PB-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
CR989LCS-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8658-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8659-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8660-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8661-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8662-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8663-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8664-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8665-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8666-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8671-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8672-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8673-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8674-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8675-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA
J8676-FS	10/11/18 KB	10/11/18 KB	NA	NA	NA	NA	NA	NA

Solvents/Reagent Preparations:

Name	ID	Expires	Lot No	Procedure	Comments
0.4% NH3 in Methanol	RP-181011-2	10/11/18	SHBJ0412	Per 100 mL, 3.5 mL ammonia solution brought to 100 mL with methanol	
0.4% NH3 in Methanol	RP-181011-2	10/11/18	183857	Per 100 mL, 3.5 mL ammonia solution brought to 100 mL with methanol	

Solvents/Reagents:

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BATTELLE - NORWELL OPERATIONS
COLUMN FRACTIONATION FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0610

CTO-4164: Analysis of Solids

SB, SS

Extract Id	Date	Init.	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comments
CR988PB-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
CR989LCS-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8658-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8659-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8660-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8661-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8662-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8663-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8664-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8665-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8666-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8671-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8672-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8673-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8674-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8675-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA
J8676-FS(3)	10/16/18	KB	NA	NA	NA	NA	NA

BATTELLE
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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Extract Id	Date	Init.	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comments

Column Diameter: 13 mm **Procedure Comment:**

Elution Volume: 10 mL

Solvents

Reagents

Reagent Prep	Weight g	Name	Expires	Lot No	Procedure
RP-181016-3	Not Measured	0.4% NH3 in Methanol	10/17/18	183857	Per 100 mL, 3.5 mL am brought to 100 mL with
RP-181016-3	Not Measured	0.4% NH3 in Methanol	10/17/18	SHBJ0412	Per 100 mL, 3.5 mL am brought to 100 mL with
RP-181016-3	Not Measured	0.4% NH3 in Methanol	10/17/18	183857	Per 100 mL, 3.5 mL am brought to 100 mL with
RP-181016-3	Not Measured	0.4% NH3 in Methanol	10/17/18	SHBJ0412	Per 100 mL, 3.5 mL am brought to 100 mL with
RP-181016-9	0.50	ENVI-CARB SPE	10/17/18	10527405	Rinse SPE cartridge wi

Fractions

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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

18-0610

CTO-4164: Analysis of Solids

SB, SS

(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
CR988PB-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
CR989LCS-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8658-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8659-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8660-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8661-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8662-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8662-FS-D(5)	975	25	KC03	50	1	1000	20.000	10/18/18 SAS	KB
J8663-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8664-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8665-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8666-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8671-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8672-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8673-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8674-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8675-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB
J8676-FS(3)	950	50	KC03	50	1	1000	10.000	10/18/18 SAS	KB

* - 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

18-0610

CTO-4164: Analysis of Solids

SB, SS

(N/A Fraction)

Extract Id	Extr. Vol. (uL)	Added (uL)	Std. Id	Accm. (uL)	Vial No.	Pre Inj. Vol. (uL)^	Final Dilution *	Date Spiked/ Spiked By	Witn'd By

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KB72	Pipette	B814659662
KC03	Pipette	B814659662

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

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

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
EXTRACT SPIKE FORM

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0610

CTO-4164: Analysis of Solids

SB, SS

Extract Id	DF	Std. ID	Type	Vial No.	Vol. Added (uL)	Conc (ug/mL)	Added (ng)	Date Spiked/ Spiked By	Witn'd By
J8662-FS-D(5)	20	KB72	SIS	1	25	0	0	10/18/18 SAS	KB

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KB72	Pipette	B814659662
KC03	Pipette	B814659662

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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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
CR988PB-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
CR988PB-FS	2	--	10/16/2018 5:47:00 PM	CR988PB-FS	0	10000	9000	1.111	1.111	10/16/18 KB
CR988PB-FS	3	--	10/16/2018 5:47:00 PM	CR988PB-FS	0	10000	1000	10.000	10.000	10/16/18 KB
CR989LCS-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
CR989LCS-FS	2	--	10/16/2018 5:47:00 PM	CR989LCS-FS	0	10000	9000	1.111	1.111	10/16/18 KB
CR989LCS-FS	3	--	10/16/2018 5:47:00 PM	CR989LCS-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8658-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8658-FS	2	--	10/16/2018 5:47:00 PM	J8658-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8658-FS	3	--	10/16/2018 5:47:00 PM	J8658-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8659-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8659-FS	2	--	10/16/2018 5:47:00 PM	J8659-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8659-FS	3	--	10/16/2018 5:47:00 PM	J8659-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8660-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8660-FS	2	--	10/16/2018 5:47:00 PM	J8660-FS	0	10000	9000	1.111	1.111	10/16/18 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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J8660-FS	3	--	10/16/2018 5:47:00 PM	J8660-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8661-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8661-FS	2	--	10/16/2018 5:47:00 PM	J8661-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8661-FS	3	--	10/16/2018 5:47:00 PM	J8661-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8662-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8662-FS	2	--	10/16/2018 5:47:00 PM	J8662-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8662-FS	3	C	10/16/2018 5:47:00 PM	J8662-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8662-FS	4	--	10/18/2018 9:44:00 AM	J8662-FS	3	1000	500	2.000	20.000	10/18/18 SAS
J8662-FS-D	5	--	10/18/2018 9:44:00 AM	J8662-FS	3	1000	500	2.000	20.000	10/18/18 SAS
J8663-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8663-FS	2	--	10/16/2018 5:47:00 PM	J8663-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8663-FS	3	--	10/16/2018 5:47:00 PM	J8663-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8664-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8664-FS	2	--	10/16/2018 5:47:00 PM	J8664-FS	0	10000	9000	1.111	1.111	10/16/18 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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J8664-FS	3	--	10/16/2018 5:47:00 PM	J8664-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8665-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8665-FS	2	--	10/16/2018 5:47:00 PM	J8665-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8665-FS	3	--	10/16/2018 5:47:00 PM	J8665-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8666-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8666-FS	2	--	10/16/2018 5:47:00 PM	J8666-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8666-FS	3	--	10/16/2018 5:47:00 PM	J8666-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8671-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8671-FS	2	--	10/16/2018 5:47:00 PM	J8671-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8671-FS	3	--	10/16/2018 5:47:00 PM	J8671-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8672-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8672-FS	2	--	10/16/2018 5:47:00 PM	J8672-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8672-FS	3	--	10/16/2018 5:47:00 PM	J8672-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8673-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 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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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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Extract		*	Extract Date	Source		Initial Extract Vol (uL)	Extract Split	Extract Split	Total Dilution	Date/Initials
Name	#			Name	#					
J8673-FS	2	--	10/16/2018 5:47:00 PM	J8673-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8673-FS	3	--	10/16/2018 5:47:00 PM	J8673-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8674-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8674-FS	2	--	10/16/2018 5:47:00 PM	J8674-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8674-FS	3	--	10/16/2018 5:47:00 PM	J8674-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8675-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8675-FS	2	--	10/16/2018 5:47:00 PM	J8675-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8675-FS	3	--	10/16/2018 5:47:00 PM	J8675-FS	0	10000	1000	10.000	10.000	10/16/18 KB
J8676-FS	0	C	10/11/2018 2:45:00 PM	NA		NA	NA	1.000	1.000	10/11/18 KB
J8676-FS	2	--	10/16/2018 5:47:00 PM	J8676-FS	0	10000	9000	1.111	1.111	10/16/18 KB
J8676-FS	3	--	10/16/2018 5:47:00 PM	J8676-FS	0	10000	1000	10.000	10.000	10/16/18 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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It can be done

BATTELLE - NORWELL OPERATIONS
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

Project Title(s)
CTO-4164 Naval Base Ventura County, California

Project No.(s)
100110125-01

18-0610

CTO-4164: Analysis of Solids

SB, SS

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Oct 19 2018 5:00PM SAS	**Received On/By:**	Oct 19 2018 5:00PM 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	CR988PB-FS(3)	1000	10	Intact	NA
2	CR989LCS-FS(3)	1000	10	Intact	NA
3	J8658-FS(3)	1000	10	Intact	NA
4	J8659-FS(3)	1000	10	Intact	NA
5	J8660-FS(3)	1000	10	Intact	NA
6	J8661-FS(3)	1000	10	Intact	NA
7	J8662-FS(3)	1000	10	Intact	NA
8	J8662-FS-D(5)	1000	20	Intact	NA
9	J8663-FS(3)	1000	10	Intact	NA
10	J8664-FS(3)	1000	10	Intact	NA
11	J8665-FS(3)	1000	10	Intact	NA
12	J8666-FS(3)	1000	10	Intact	NA
13	J8671-FS(3)	1000	10	Intact	NA
14	J8672-FS(3)	1000	10	Intact	NA
15	J8673-FS(3)	1000	10	Intact	NA
16	J8674-FS(3)	1000	10	Intact	NA
17	J8675-FS(3)	1000	10	Intact	NA
18	J8676-FS(3)	1000	10	Intact	NA

Total Extracts: 18

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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

18-0610

CTO-4164: Analysis of Solids

SB, SS

Sample ID:	Comment:	Date/Initials:
CR988PB-FS	NA	NA
CR989LCS-FS	NA	NA
J8658-FS	NA	NA
J8659-FS	NA	NA
J8660-FS	Sample was difficult to weigh out as it was very viscous. The weighed amount of this sample is 0.02g above the target outlined in the SOP (2.0+/- 0.2g)	10/11/18 KB
J8661-FS	NA	NA
J8662-FS	NA	NA
J8663-FS	NA	NA
J8664-FS	NA	NA
J8665-FS	NA	NA
J8666-FS	NA	NA
J8671-FS	NA	NA
J8672-FS	NA	NA
J8673-FS	NA	NA
J8674-FS	NA	NA
J8675-FS	NA	NA
J8676-FS	NA	NA

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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title(s)	**Project No.(s)**
CTO-4164 Naval Base Ventura County, California	100110125-01

18-0610

CTO-4164: Analysis of Solids

SB, SS

Entered By:	**On:**

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

Analytical Calibrations

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 24/10/2018 11:35:43 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
1	MeOH		10/17/2018 9:35:33 PM	5-0369.dam	Data18-0590_18-01588_18-0589.wiff
1	KB75 ISC	ISC	10/19/2018 6:16:51 PM	5-0369.dam	10192018.wiff
2	KB80 IB		10/19/2018 6:27:43 PM	5-0369.dam	10192018.wiff
3	MeOH		10/19/2018 6:38:37 PM	5-0369.dam	10192018.wiff
29	KB76 CCV	CCV	10/19/2018 11:53:48 PM	5-0369.dam	10192018.wiff
30	MeOH		10/20/2018 12:04:41 AM	5-0369.dam	10192018.wiff
31	CR988PB-FS(3)	Procedural Blank	10/20/2018 12:15:33 AM	5-0369.dam	10192018.wiff
32	CR989LCS-FS(3)	Laboratory Control Sample	10/20/2018 12:26:25 AM	5-0369.dam	10192018.wiff
33	J8658-FS(3)	VC-CS12-SS01-000H	10/20/2018 12:37:17 AM	5-0369.dam	10192018.wiff
34	J8659-FS(3)	VC-CS12-SB01-0102	10/20/2018 12:48:08 AM	5-0369.dam	10192018.wiff
35	J8660-FS(3)	VC-CS12-SB01-0506	10/20/2018 12:59:00 AM	5-0369.dam	10192018.wiff
36	J8661-FS(3)	VC-CS12-SS02-000H	10/20/2018 1:09:52 AM	5-0369.dam	10192018.wiff
37	~~J8662-FS-D(5)~~	~~VC-CS12-SB02-0102~~	10/20/2018 1:20:44 AM	~~5-0369.dam~~	~~10192018.wiff~~
38	J8662-FS(3)	VC-CS12-SB02-0102	10/20/2018 1:31:37 AM	5-0369.dam	10192018.wiff
39	J8663-FS(3)	VC-CS12-SB02-0506	10/20/2018 1:42:29 AM	5-0369.dam	10192018.wiff
40	J8664-FS(3)	VC-CS12-SS03-000H	10/20/2018 1:53:22	5-0369.dam	10192018.wiff

(3)

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 24/10/2018 11:35:43 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File	
			AM			
41	KB77 CCV	CCV	10/20/2018 2:04:14 AM	5-0369.dam	10192018.wiff	
30	MeOH		10/20/2018 2:15:07 AM	5-0369.dam	10192018.wiff	
42	~~J8665-FS(3)~~	~~VC-CS12-SB03-0102~~	~~10/20/2018 2:25:59 AM~~	~~5-0369.dam~~	~~10192018.wiff~~	(2)
43	J8666-FS(3)	VC-CS12-SB03-0506	10/20/2018 2:36:51 AM	5-0369.dam	10192018.wiff	
44	J8671-FS(3)	VC-CS10-SS01-000H	10/20/2018 2:47:42 AM	5-0369.dam	10192018.wiff	
45	J8672-FS(3)	VC-CS10-SB01-0102	10/20/2018 2:58:33 AM	5-0369.dam	10192018.wiff	
46	J8673-FS(3)	VC-CS10-SB01-0506	10/20/2018 3:09:25 AM	5-0369.dam	10192018.wiff	
47	J8674-FS(3)	VC-CS10-SS02-000H	10/20/2018 3:20:16 AM	5-0369.dam	10192018.wiff	
48	J8675-FS(3)	VC-CS10-SB02-0102	10/20/2018 3:31:08 AM	5-0369.dam	10192018.wiff	
49	J8676-FS(3)	VC-CS10-SB02-0506	10/20/2018 3:41:59 AM	5-0369.dam	10192018.wiff	
50	KB76 CCV	CCV	10/20/2018 3:52:52 AM	5-0369.dam	10192018.wiff	
~~30~~	MeOH		10/20/2018 4:03:44 AM	5-0369.dam	10192018.wiff	
51	CR990PB-FS(3)	Procedural Blank	10/20/2018 4:14:37 AM	5-0369.dam	10192018.wiff	
52	CR991LCS-FS(3)	Laboratory Control Sample	10/20/2018 4:25:28 AM	5-0369.dam	10192018.wiff	
53	J8677-FS(3)	VC-CS10-SS03-000H	10/20/2018 4:36:21 AM	5-0369.dam	10192018.wiff	
54	J8678-FS(3)	VC-CS10-SB03-0102	10/20/2018 4:47:12 AM	5-0369.dam	10192018.wiff	
1	J8679-FS(3)	VC-CS10-SB03-0506	10/20/2018 4:58:05 AM	5-0369.dam	10192018.wiff	
2	J8680-FS(3)	VC-CS10-SS04-000H	10/20/2018 5:08:58 AM	5-0369.dam	10192018.wiff	
3	J8681-FS(3)	VC-CS10-SB04-0102	10/20/2018 5:19:52 AM	5-0369.dam	10192018.wiff	
4	J8682-FS(3)	VC-CS10-SB04-0506	10/20/2018 5:30:46 AM	5-0369.dam	10192018.wiff	(1)
5	J8689-FS(3)	VC-CS10-SD01-000H	10/20/2018 5:41:39 AM	5-0369.dam	10192018.wiff	
6	J8690-FS(3)	VC-CS10-SD01-0102	10/20/2018 5:52:33 AM	5-0369.dam	10192018.wiff	
7	KB77 CCV	CCV	10/20/2018 6:03:27 AM	5-0369.dam	10192018.wiff	
20	MeOH		10/20/2018 6:14:20 AM	5-0369.dam	10192018.wiff	
8	J8691-FS(3)	VC-CS18-SS01-000H	10/20/2018 6:25:13 AM	5-0369.dam	10192018.wiff	
9	J8692-FS(3)	VC-CS18-SB01-0102	10/20/2018 6:36:06 AM	5-0369.dam	10192018.wiff	

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 24/10/2018 11:35:43 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File	
10	J8692-FS-D(5)	VC-CS18-SB01-0102	10/20/2018 6:46:58 AM	5-0369.dam	10192018.wiff	
11	J8693-FS(3)	VC-CS18-SB01-0506	10/20/2018 6:57:51 AM	5-0369.dam	10192018.wiff	
12	J8694-FS(3)	VC-CS00-SS01-000H	10/20/2018 7:08:44 AM	5-0369.dam	10192018.wiff	
13	J8695-FS(3)	VC-CS00-SB01-0102	10/20/2018 7:19:37 AM	5-0369.dam	10192018.wiff	
14	J8696-FS(3)	VC-CS00-SB01-0506	10/20/2018 7:30:31 AM	5-0369.dam	10192018.wiff	(1)
15	J8696-FS-D(5)	VC-CS00-SB01-0506	10/20/2018 7:41:23 AM	5-0369.dam	10192018.wiff	
16	J8697-FS(3)	VC-CS00-SS02-000H	10/20/2018 7:52:16 AM	5-0369.dam	10192018.wiff	
50	KB76 CCV	CCV	10/20/2018 8:24:52 AM	5-0369.dam	10192018.wiff	
1	KB75 ISC	ISC	10/22/2018 7:32:46 PM	5-0369.dam	10222018_5500.wiff	
2	KB80 IB	IB	10/22/2018 7:43:39 PM	5-0369.dam	10222018_5500.wiff	
3	MeOH		10/22/2018 7:54:32 PM	5-0369.dam	10222018_5500.wiff	
5	J8665-FS(3)	VC-CS12-SB03-0102	10/22/2018 8:16:16 PM	5-0369.dam	10222018_5500.wiff	
6	J8691-FS(3)	VC-CS18-SS01-000H	10/22/2018 8:27:08 PM	5-0369.dam	10222018_5500.wiff	
7	J8692-FS(3)	VC-CS18-SB01-0102	10/22/2018 8:38:01 PM	5-0369.dam	10222018_5500.wiff	
8	J8692-FS-D(5)	VC-CS18-SB01-0102	10/22/2018 8:48:53 PM	5-0369.dam	10222018_5500.wiff	
9	J8693-FS(3)	VC-CS18-SB01-0506	10/22/2018 8:59:45 PM	5-0369.dam	10222018_5500.wiff	(1)
10	J8694-FS(3)	VC-CS00-SS01-000H	10/22/2018 9:10:36 PM	5-0369.dam	10222018_5500.wiff	
11	J8695-FS(3)	VC-CS00-SB01-0102	10/22/2018 9:21:28 PM	5-0369.dam	10222018_5500.wiff	
12	J8696-FS(3)	VC-CS00-SB01-0506	10/22/2018 9:32:20 PM	5-0369.dam	10222018_5500.wiff	
13	KB77 CCV	CCV	10/22/2018 9:43:12 PM	5-0369.dam	10222018_5500.wiff	
14	MeOH		10/22/2018 9:54:04 PM	5-0369.dam	10222018_5500.wiff	
15	J8696-FS-D(5)	VC-CS00-SB01-0506	10/22/2018 10:04:57 PM	5-0369.dam	10222018_5500.wiff	
16	J8697-FS(3)	VC-CS00-SS02-000H	10/22/2018 10:15:49 PM	5-0369.dam	10222018_5500.wiff	(1)
13	KB77 CCV	CCV	10/22/2018 10:26:39 PM	5-0369.dam	10222018_5500.wiff	

(1) Samples not associated with this batch. LMG 10/24/18

(2) Sample was realiquoted and reanalyzed due to a low surrogate recovery. The reanalysis was reported. LMG 10/24/18

(3) Dilution was not needed and not reported LMG 10/24/18

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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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Calibration Summary Report

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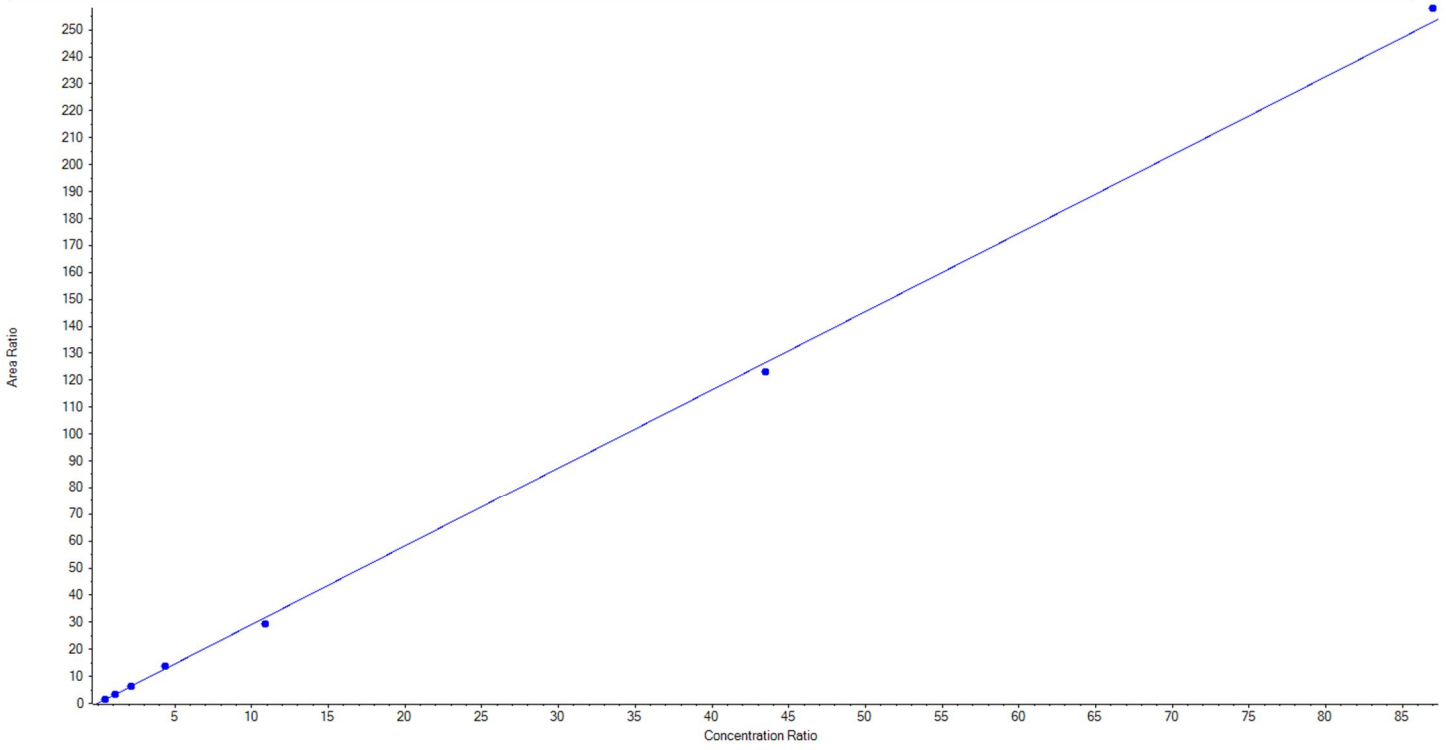
Analyte Name	PFBS_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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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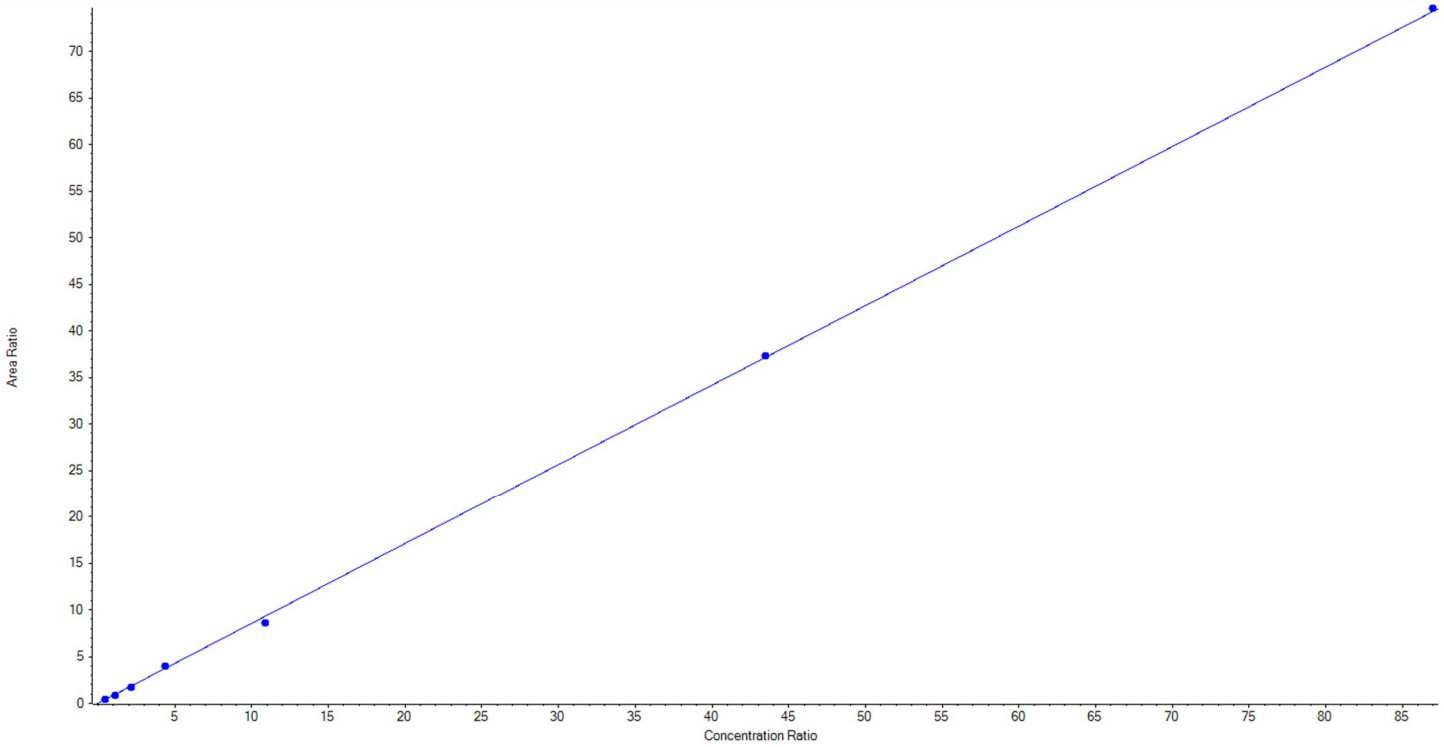
Calibration Summary Report

Created with Analyst Reporter
Printed: 24/10/2018 1:10:09 PM

Analyte Name	PFBS_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0610_18-0611_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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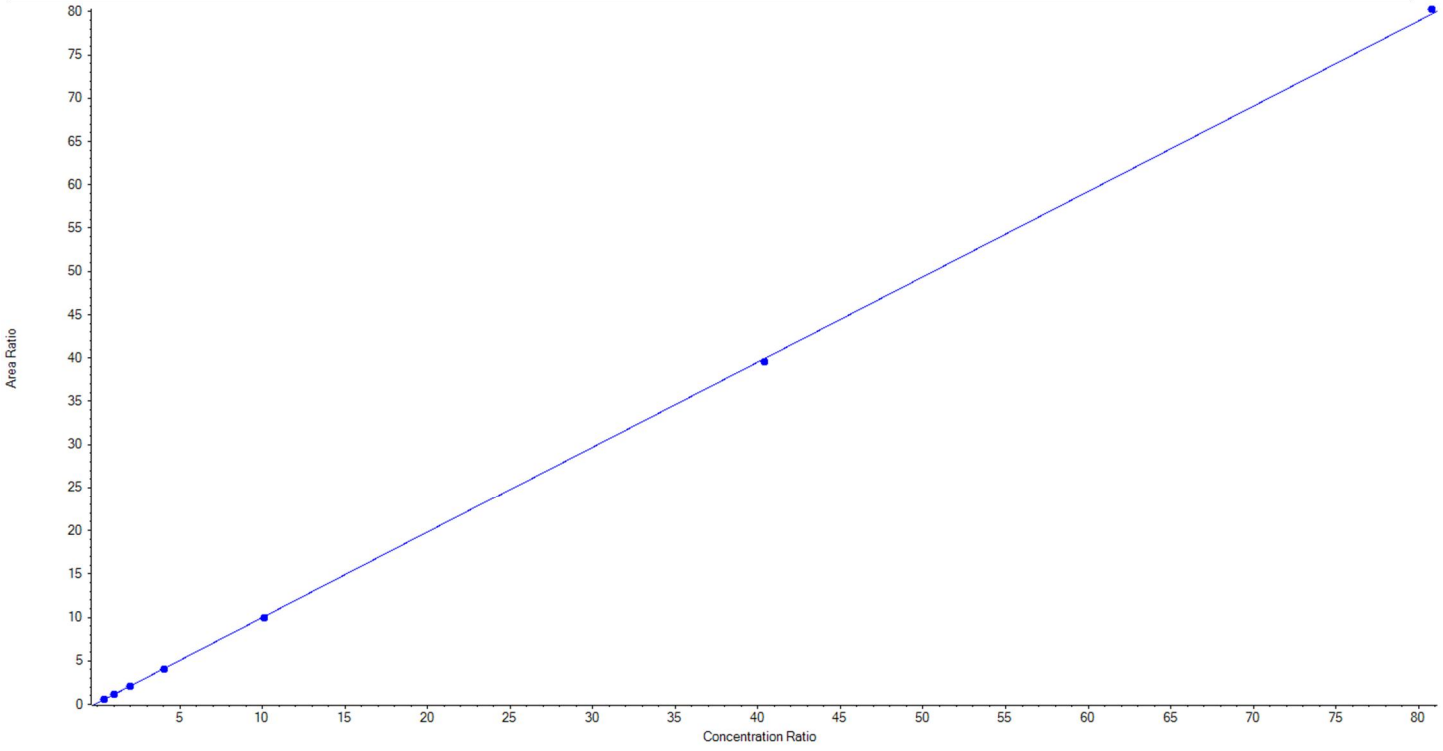
Calibration Summary Report

Created with Analyst Reporter
Printed: 24/10/2018 1:10:09 PM

Analyte Name	PFHxA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0610_18-0611_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
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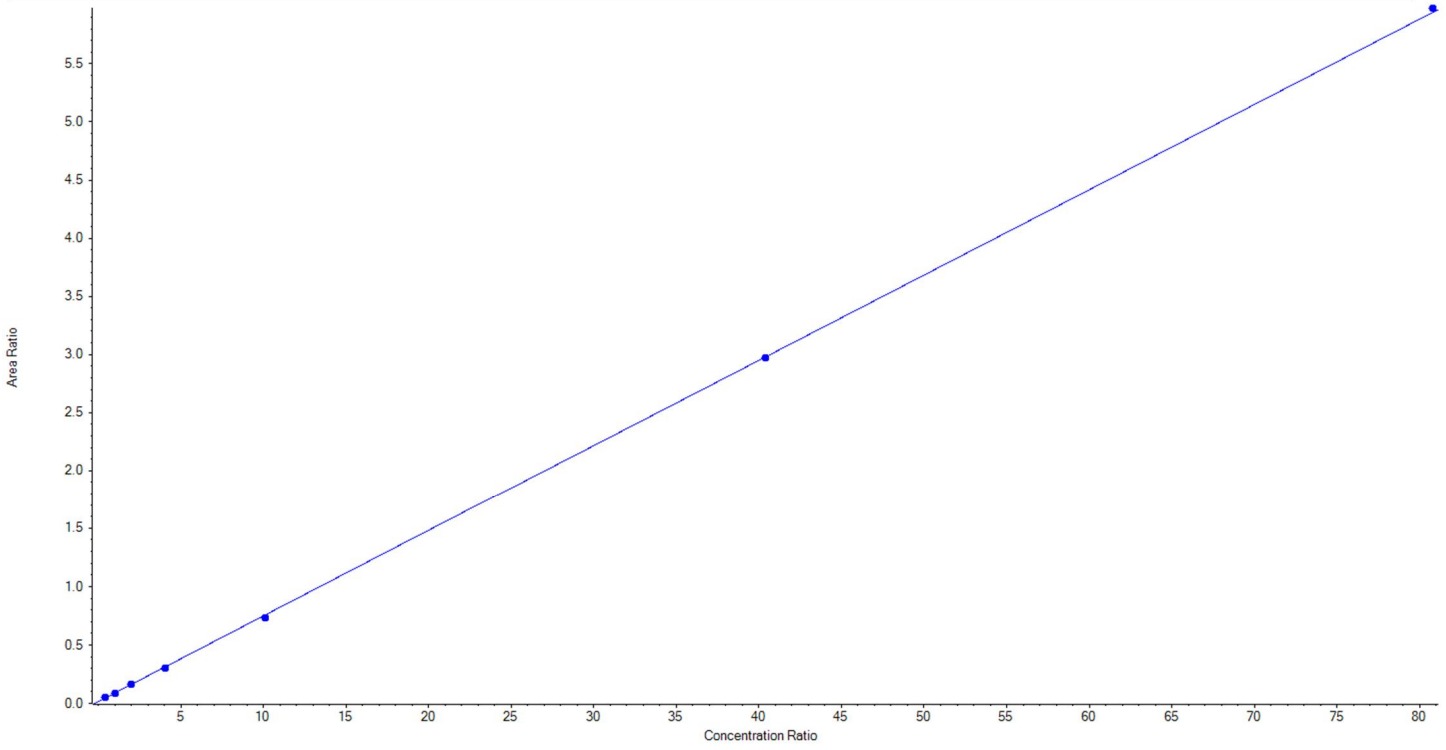
Analyte Name	PFHxA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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
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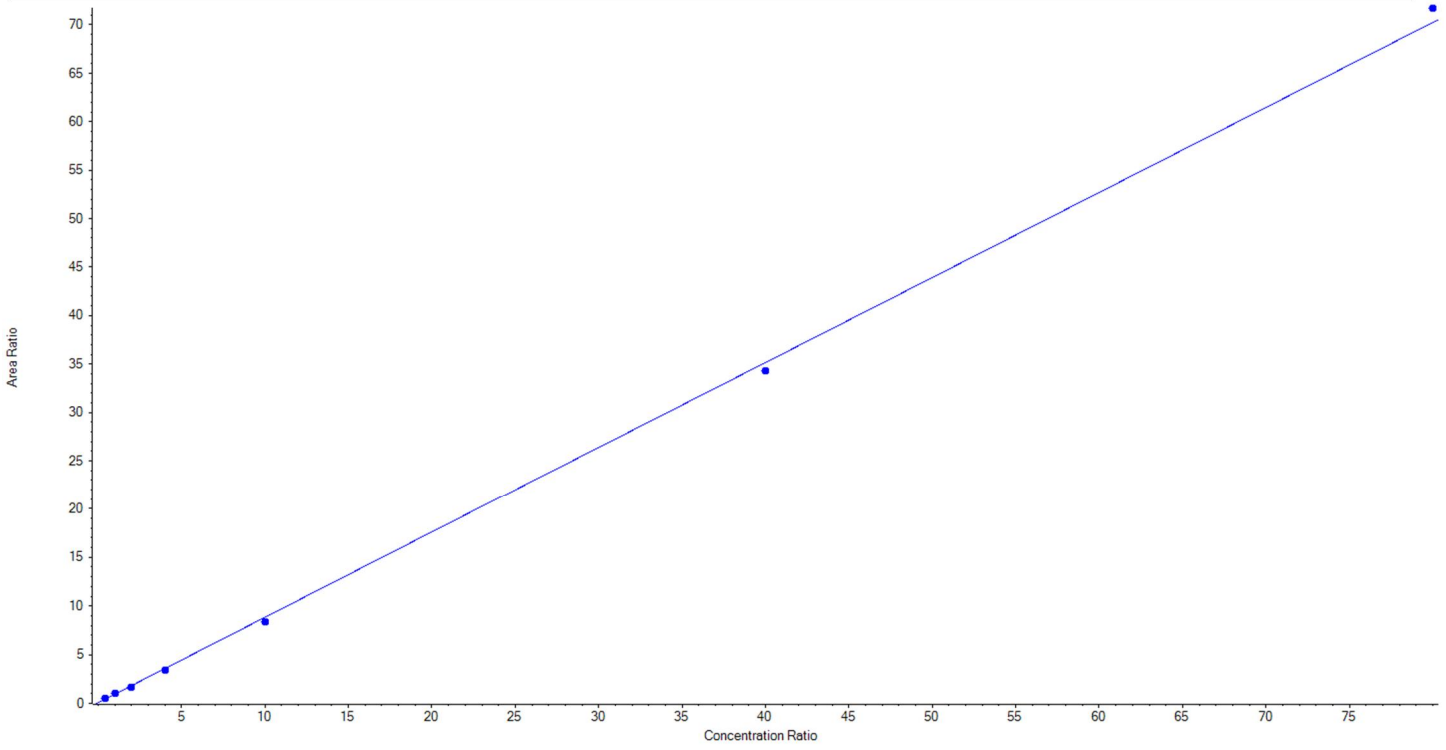
Analyte Name	PFHpA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	363.0 / 319.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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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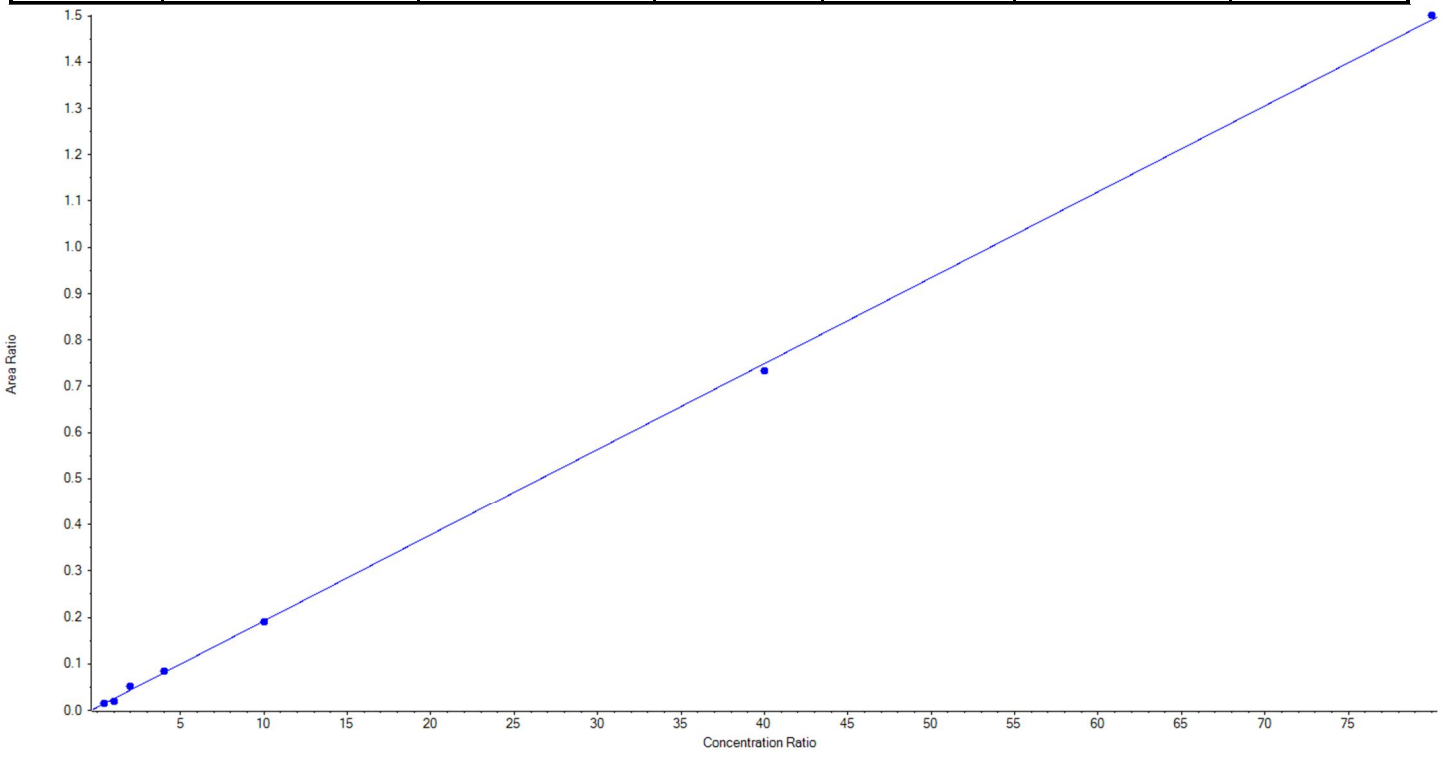
Calibration Summary Report

Created with Analyst Reporter
Printed: 24/10/2018 1:10:09 PM

Analyte Name	PFHpA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	363.0 / 169.0	**Result Table**	18-0610_18-0611_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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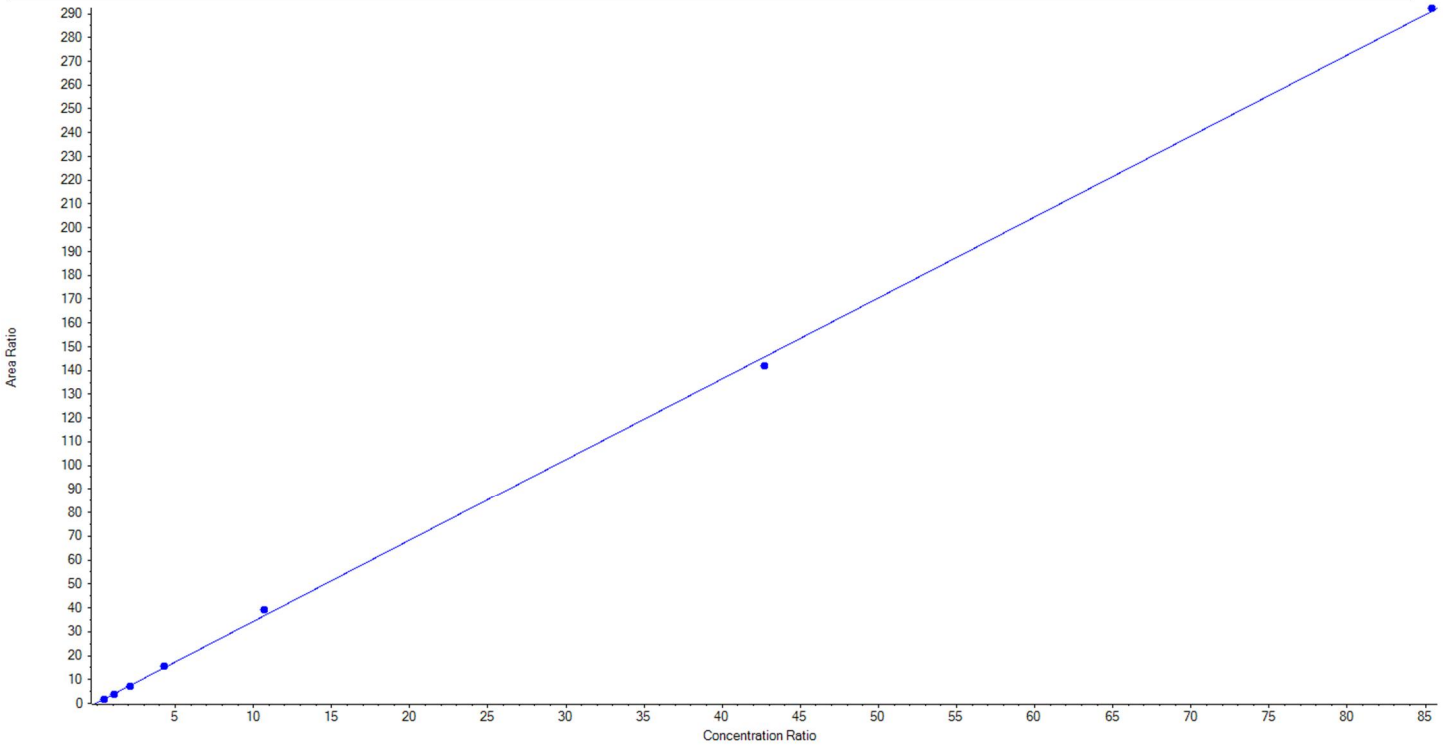
Calibration Summary Report

Created with Analyst Reporter
Printed: 24/10/2018 1:10:09 PM

Analyte Name	PFHxS_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0610_18-0611_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
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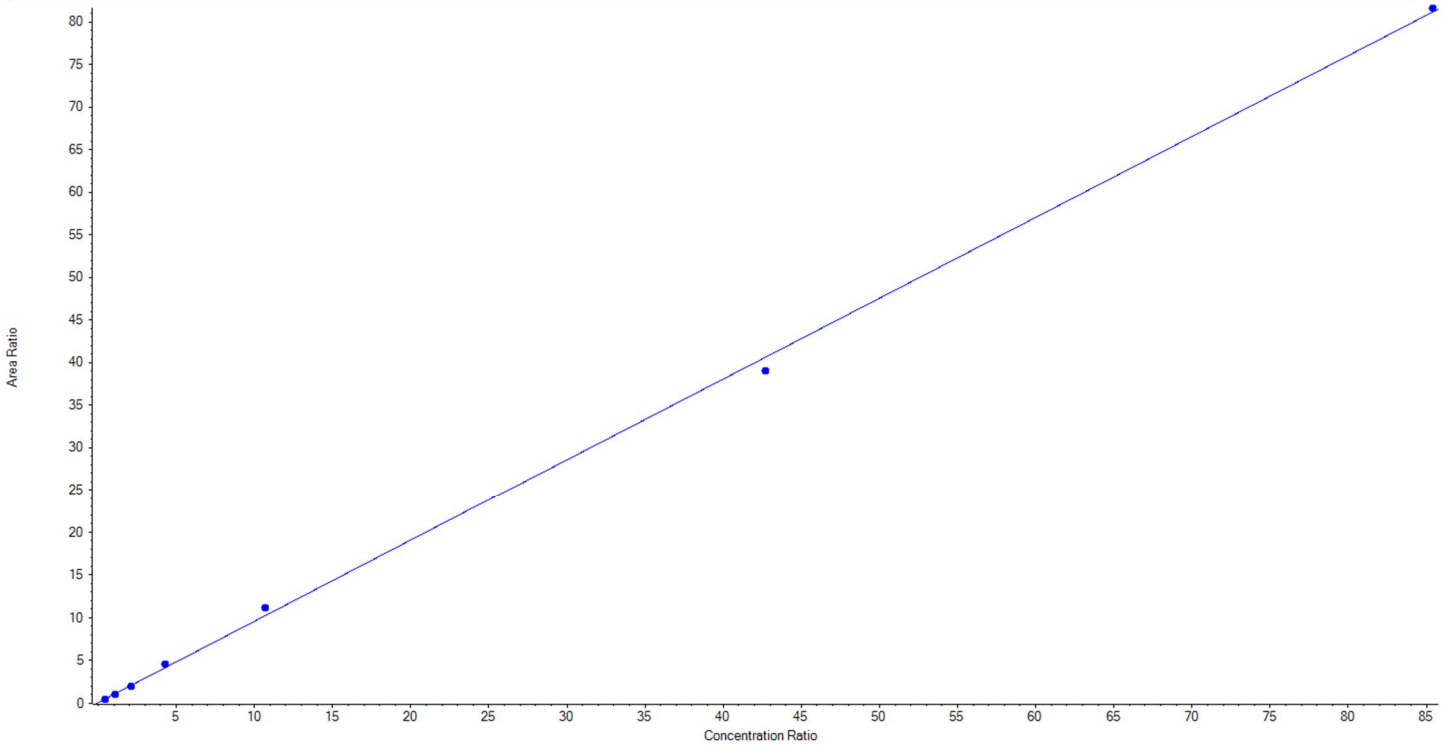
Analyte Name	PFHxS_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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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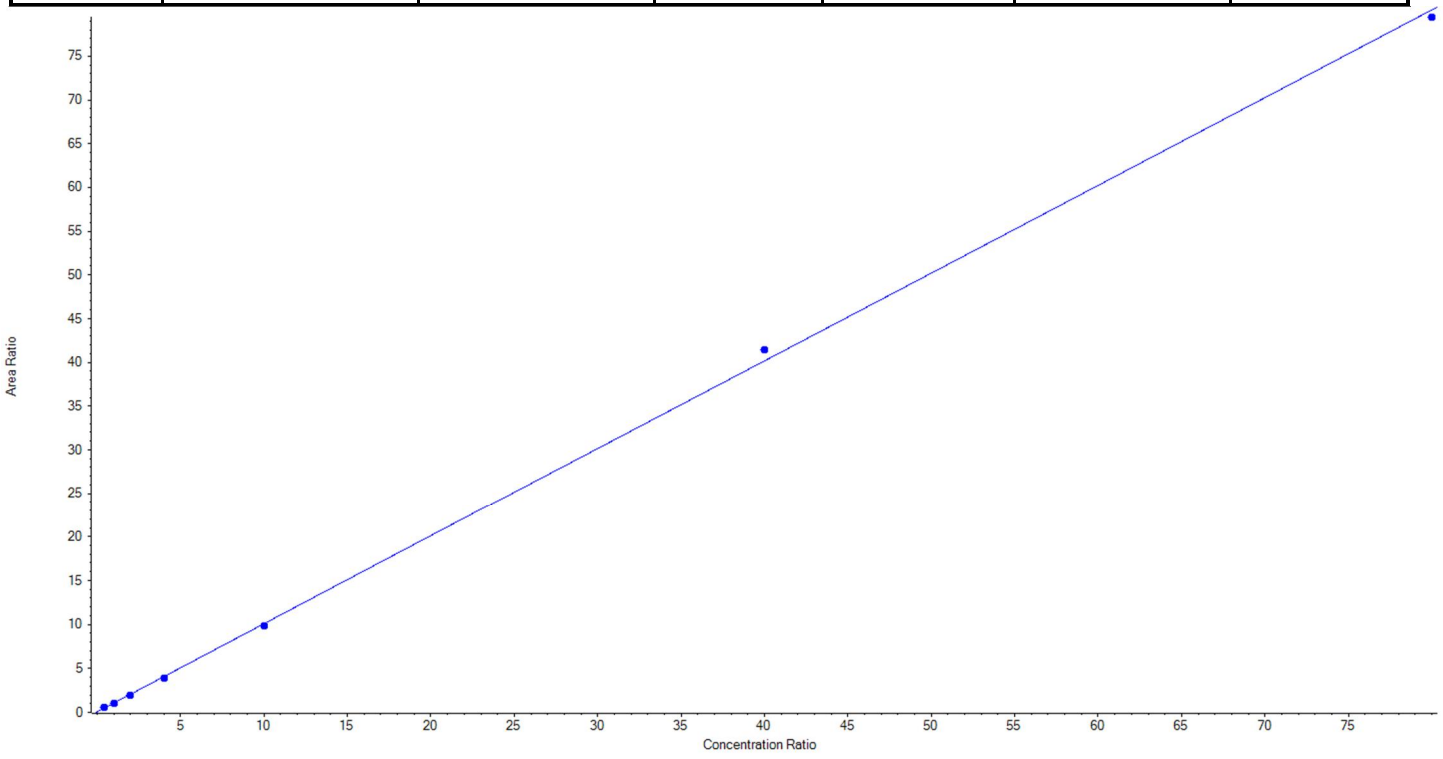
Calibration Summary Report

Created with Analyst Reporter
Printed: 24/10/2018 1:10:09 PM

Analyte Name	PFOA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0610_18-0611_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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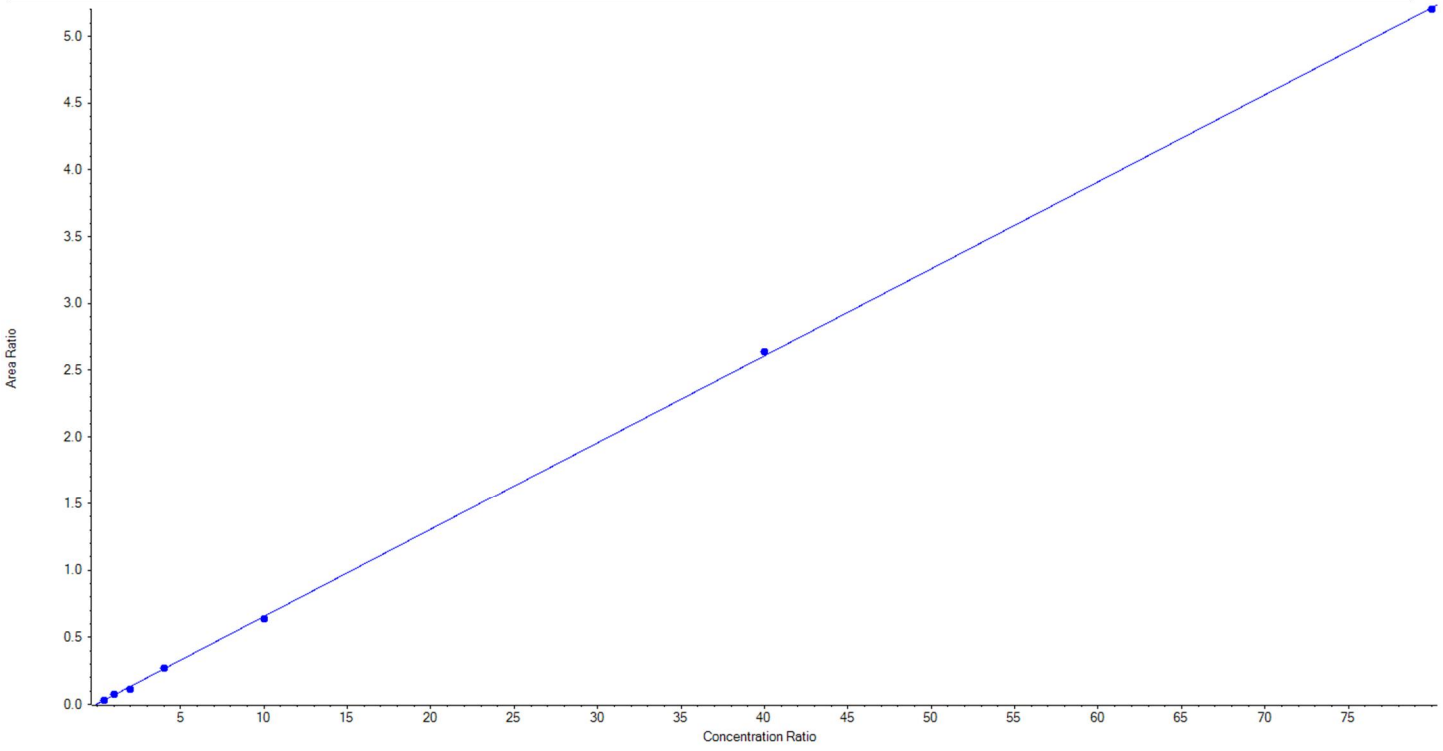
Calibration Summary Report

Created with Analyst Reporter
Printed: 24/10/2018 1:10:09 PM

Analyte Name	PFOA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0610_18-0611_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

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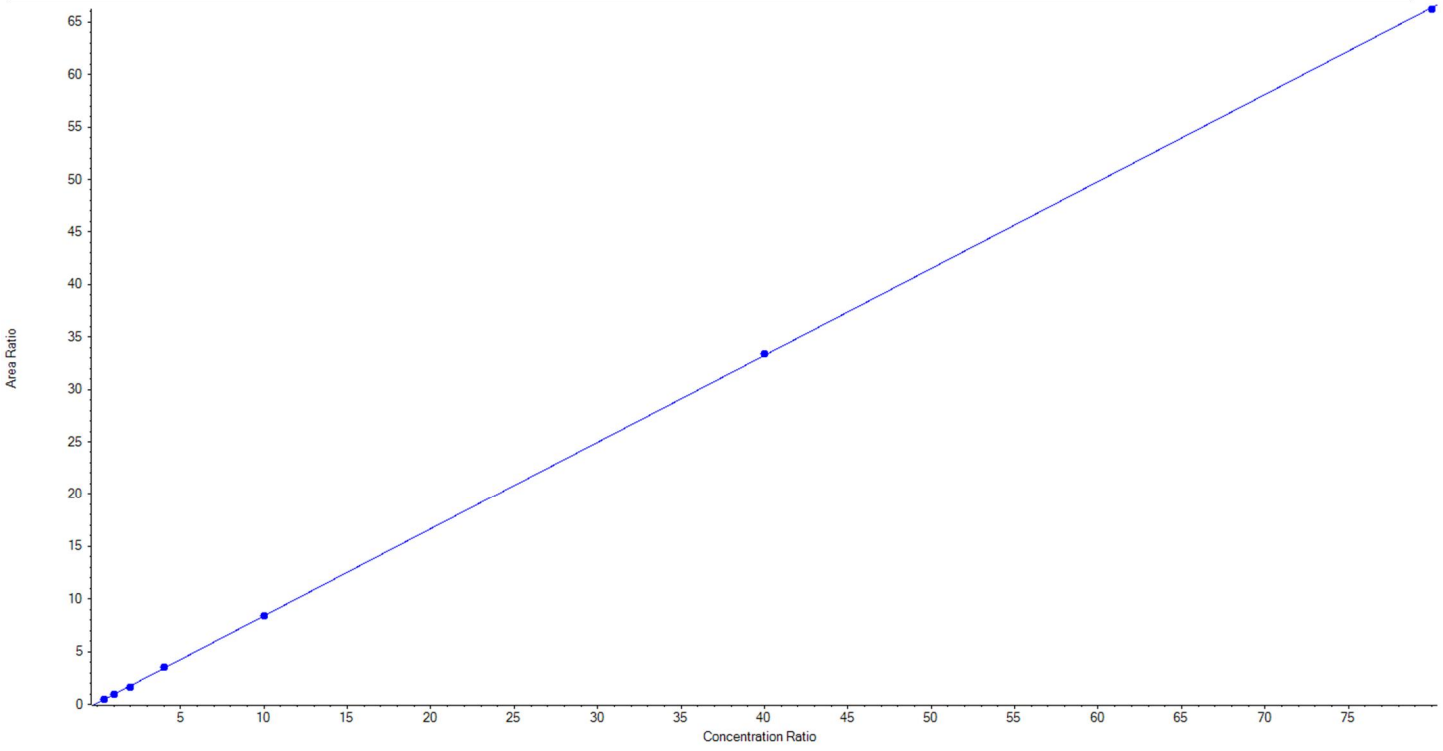
Analyte Name	PFNA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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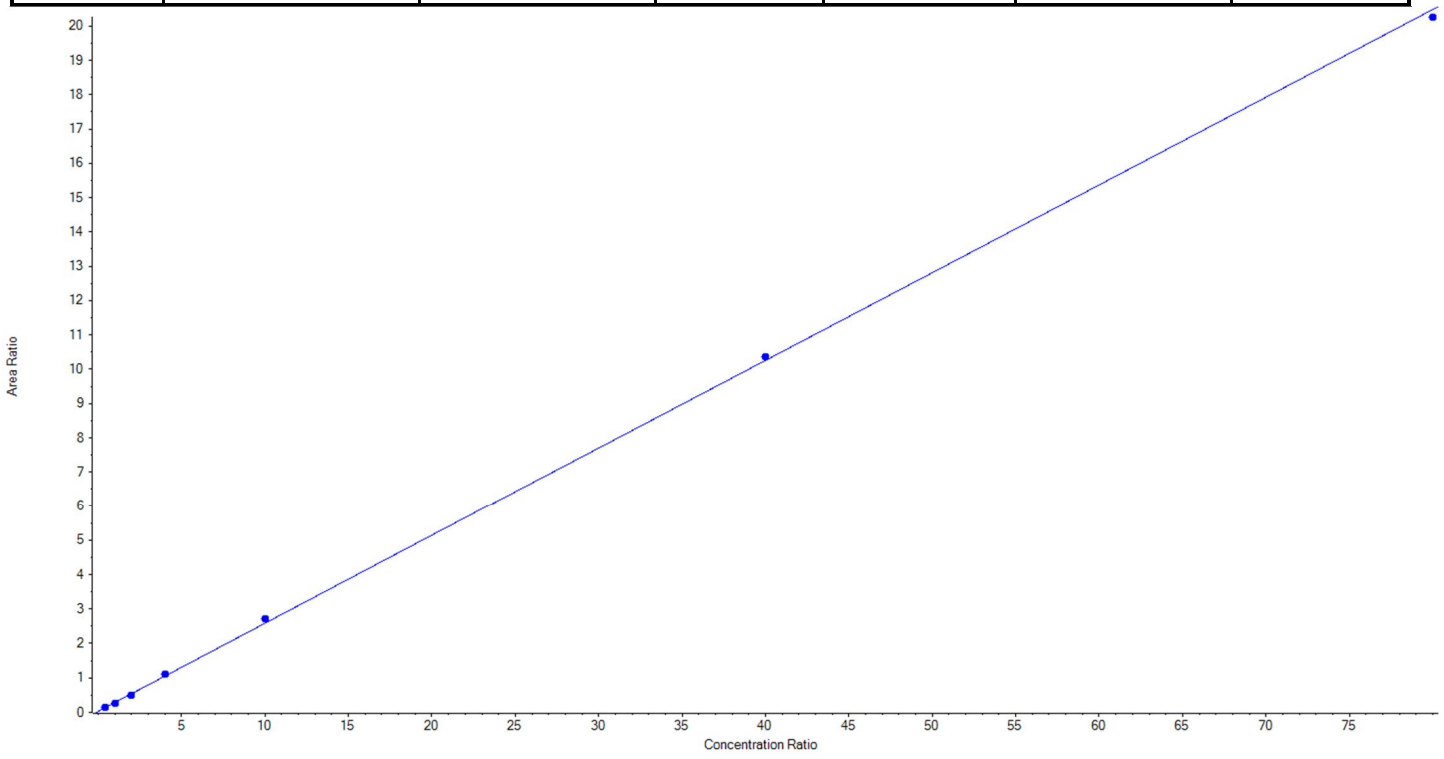
Analyte Name	PFNA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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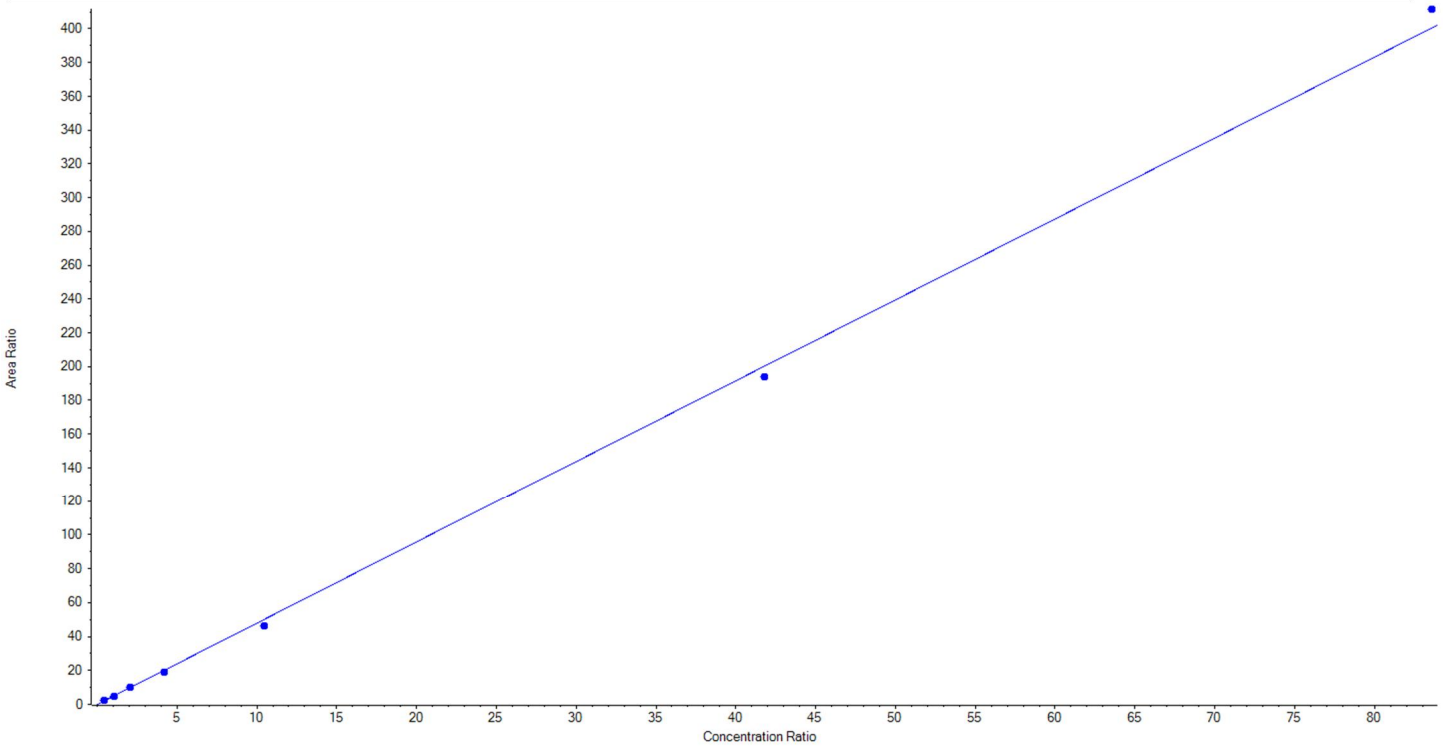
Analyte Name	PFOS_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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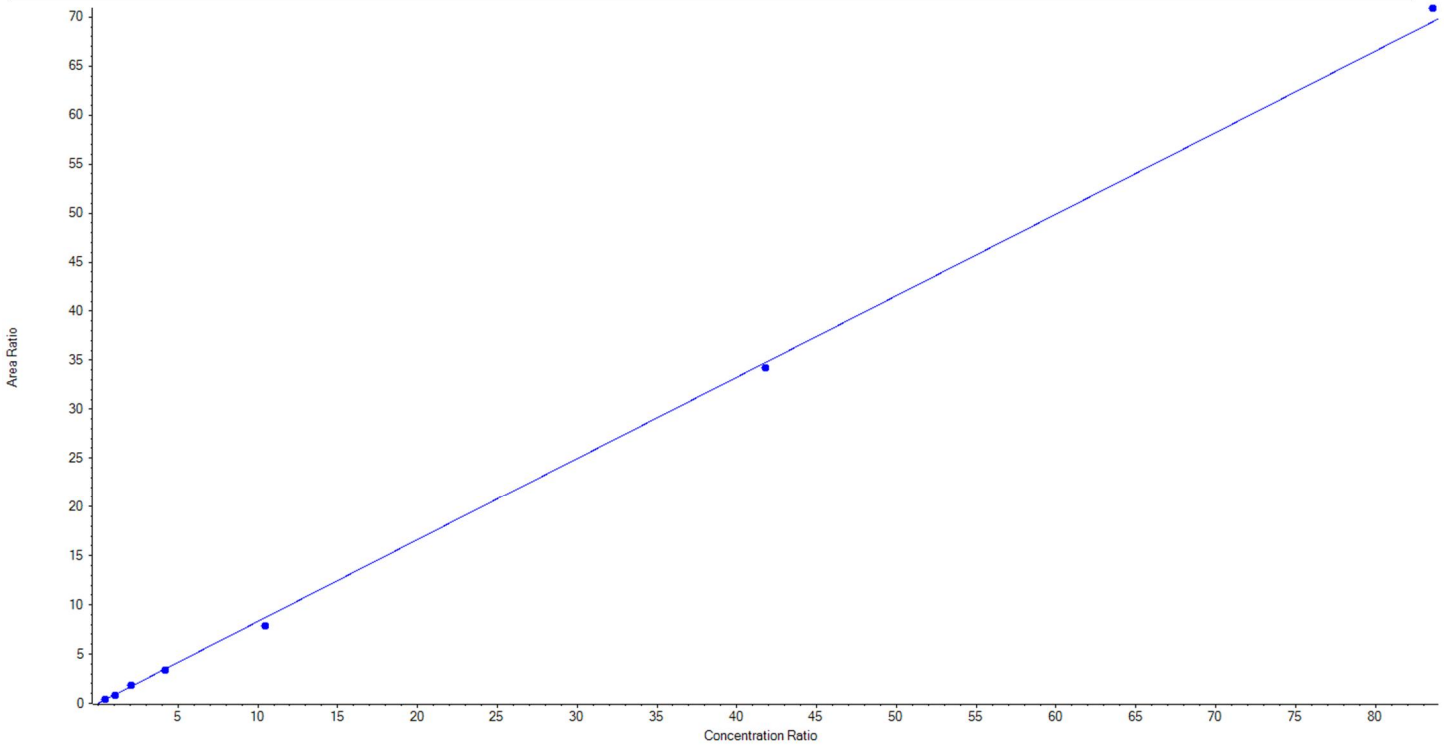
Analyte Name	PFOS_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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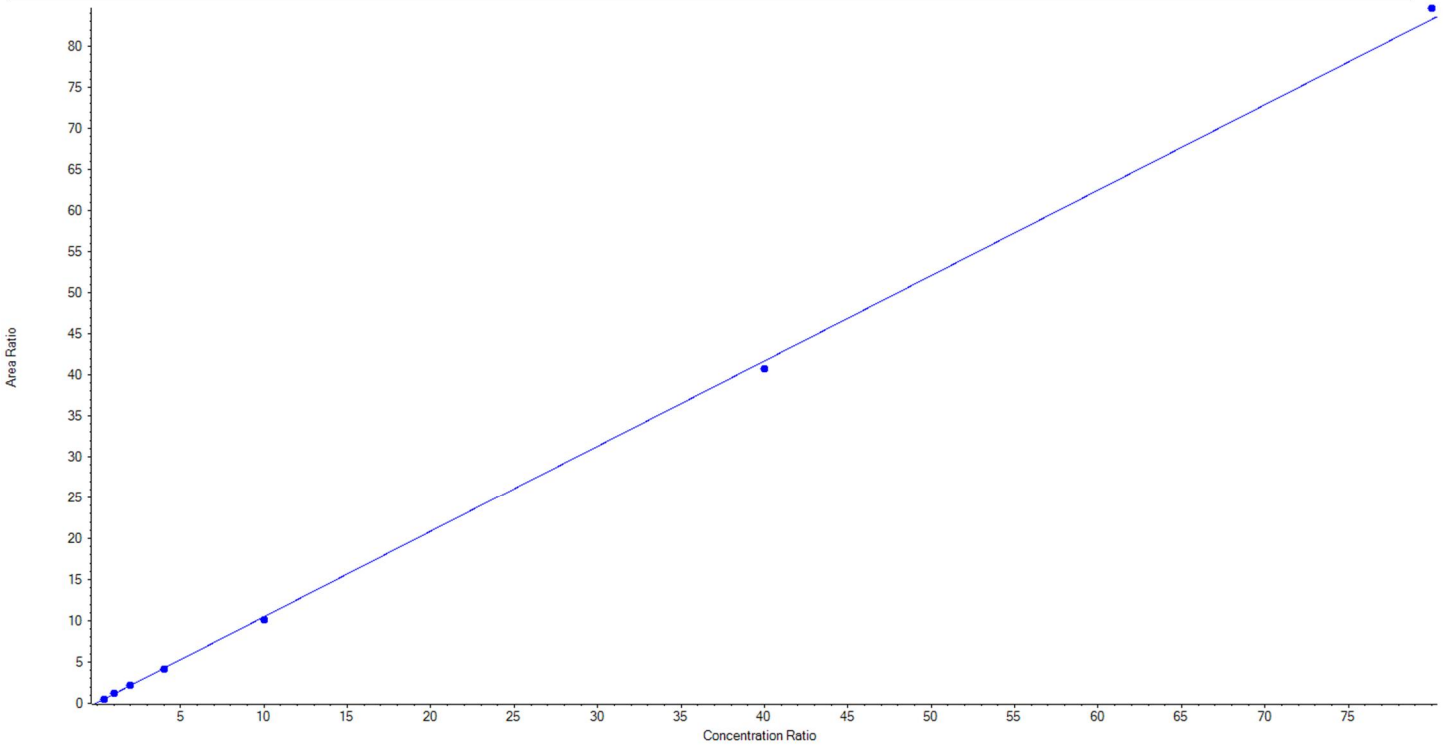
Analyte Name	PFDA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	513.0 / 469.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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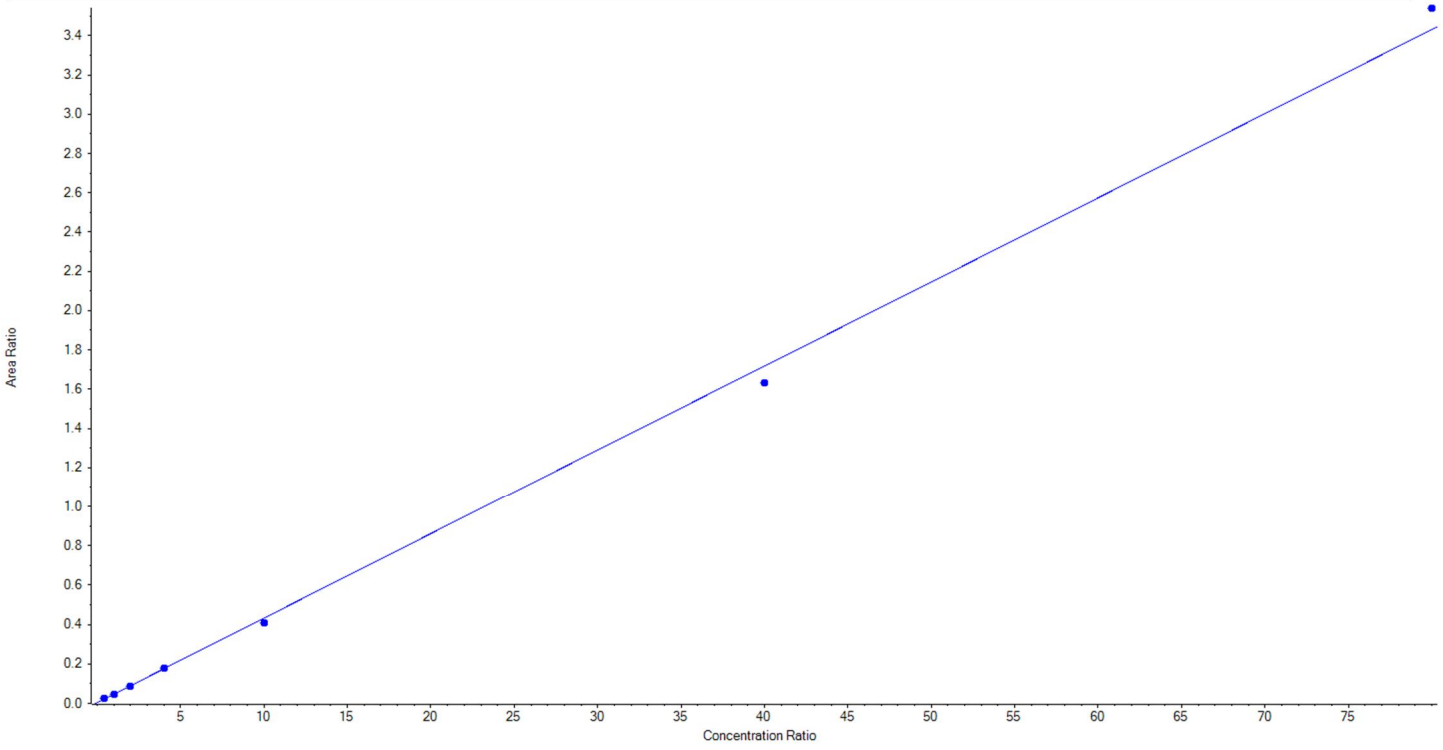
Analyte Name	PFDA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	513.0 / 219.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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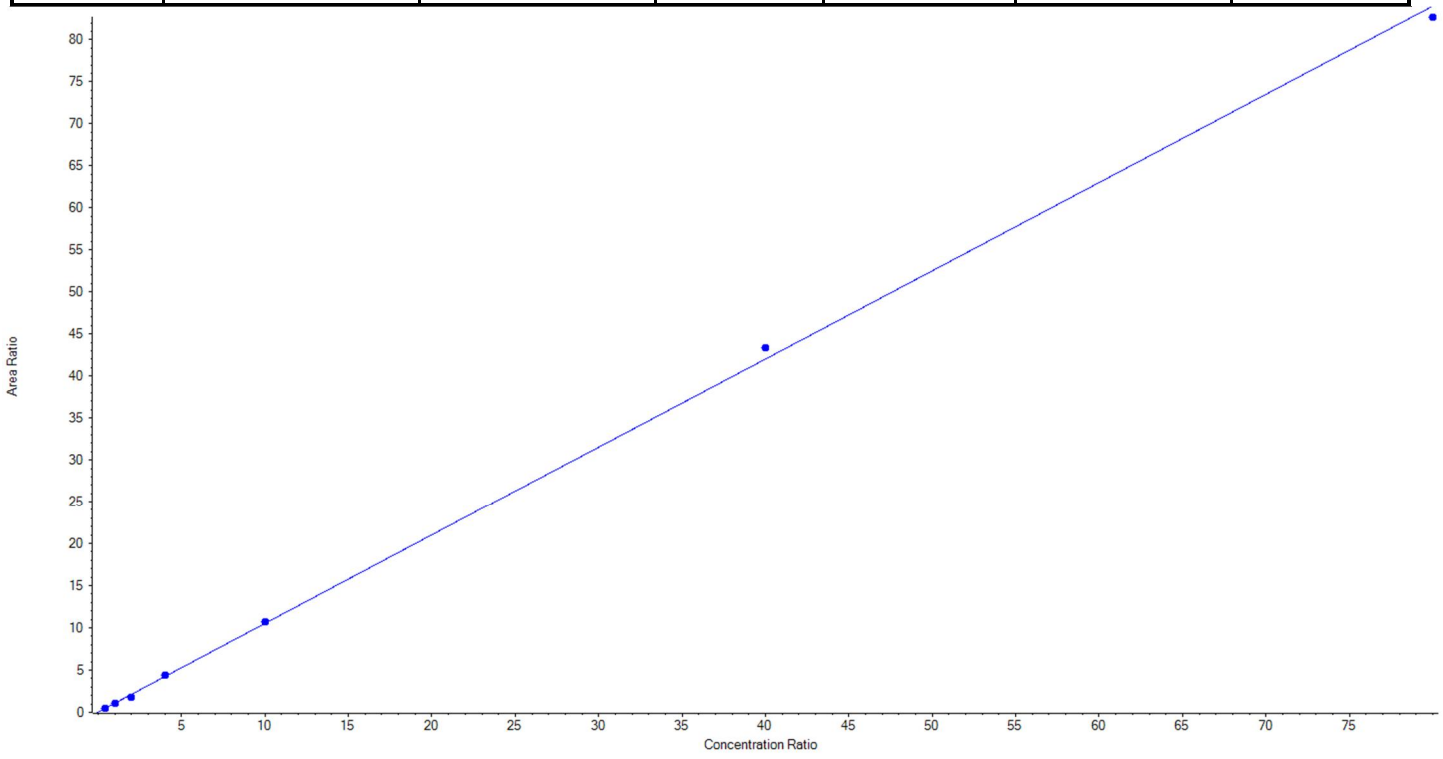
Analyte Name	PFUnA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	563.0 / 519.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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
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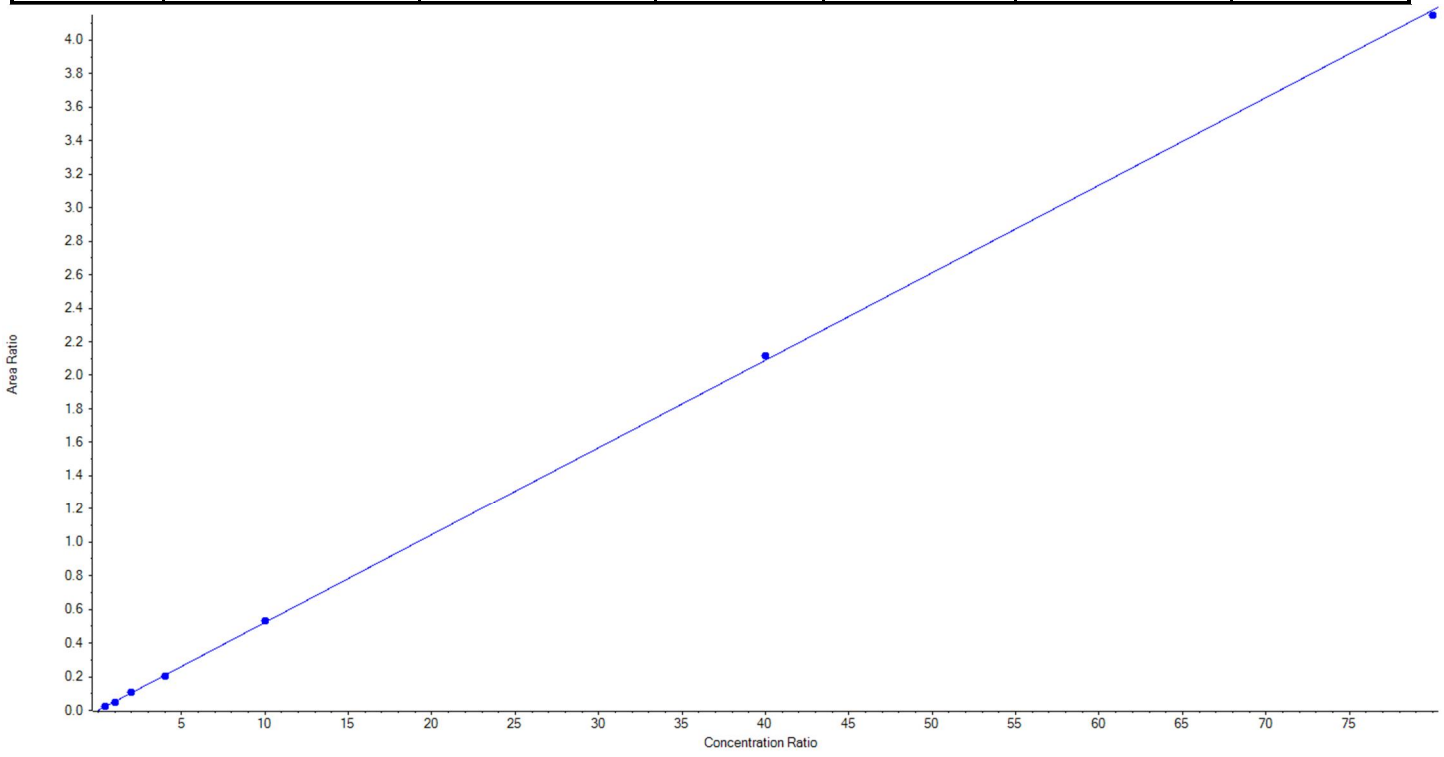
Analyte Name	PFUnA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	563.0 / 269.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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
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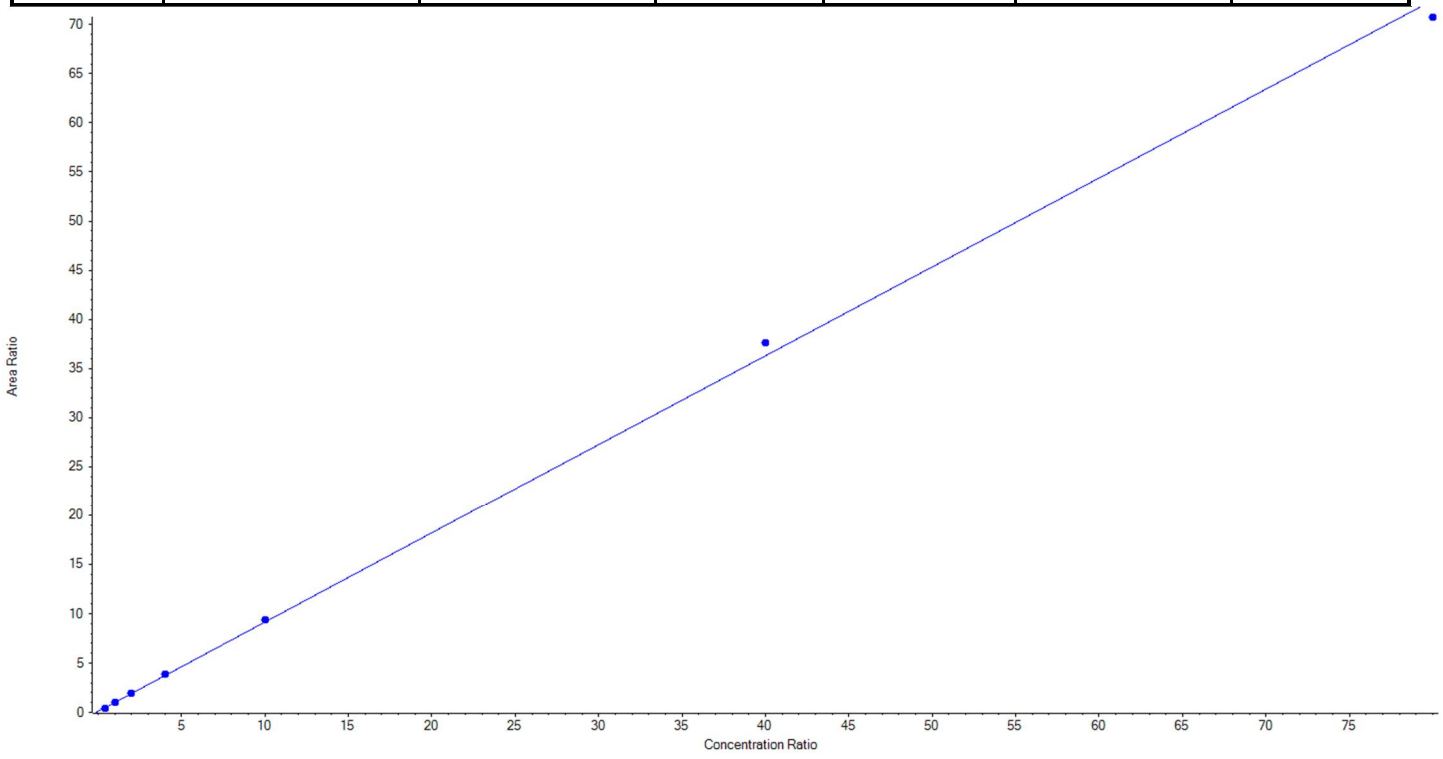
Analyte Name	PFDoA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	613.0 / 569.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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
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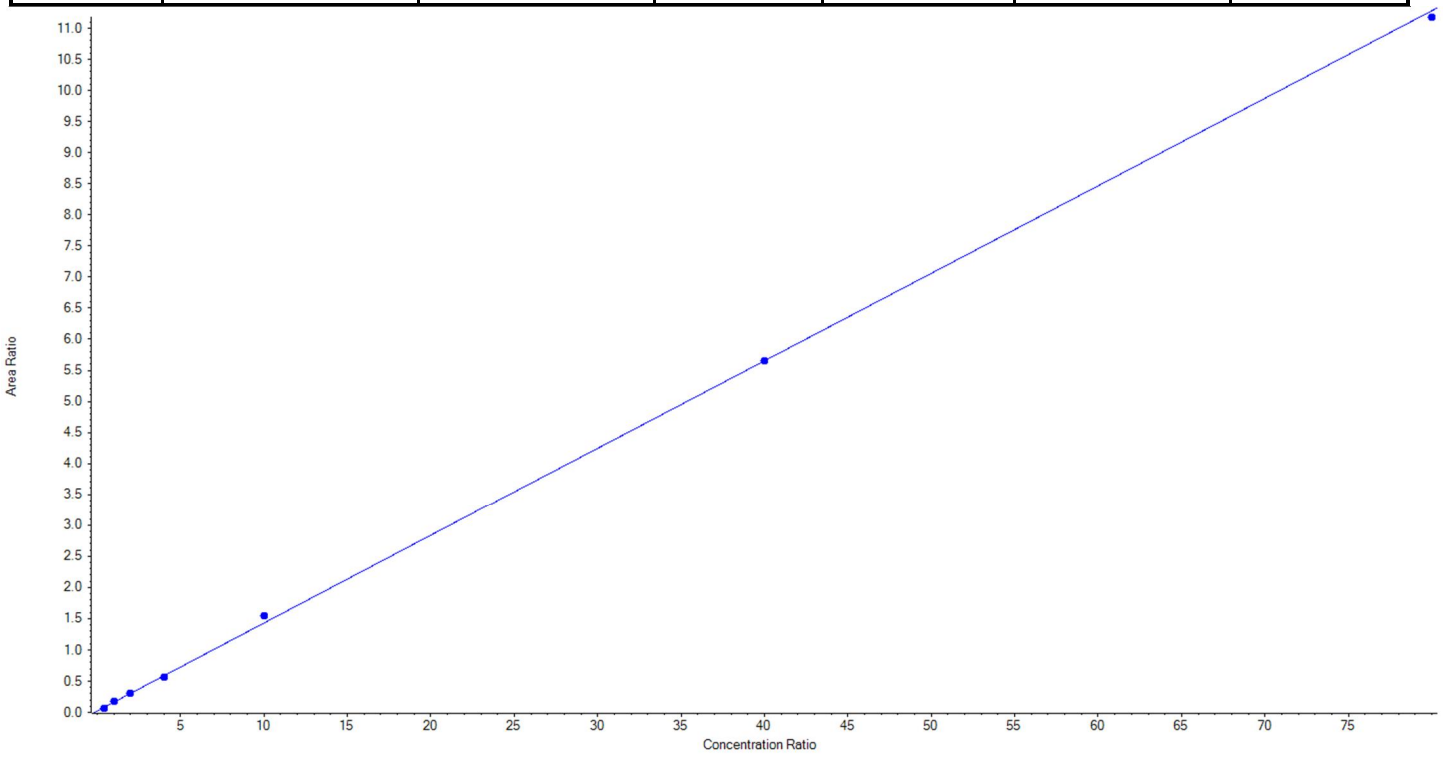
Analyte Name	PFDoA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	613.0 / 319.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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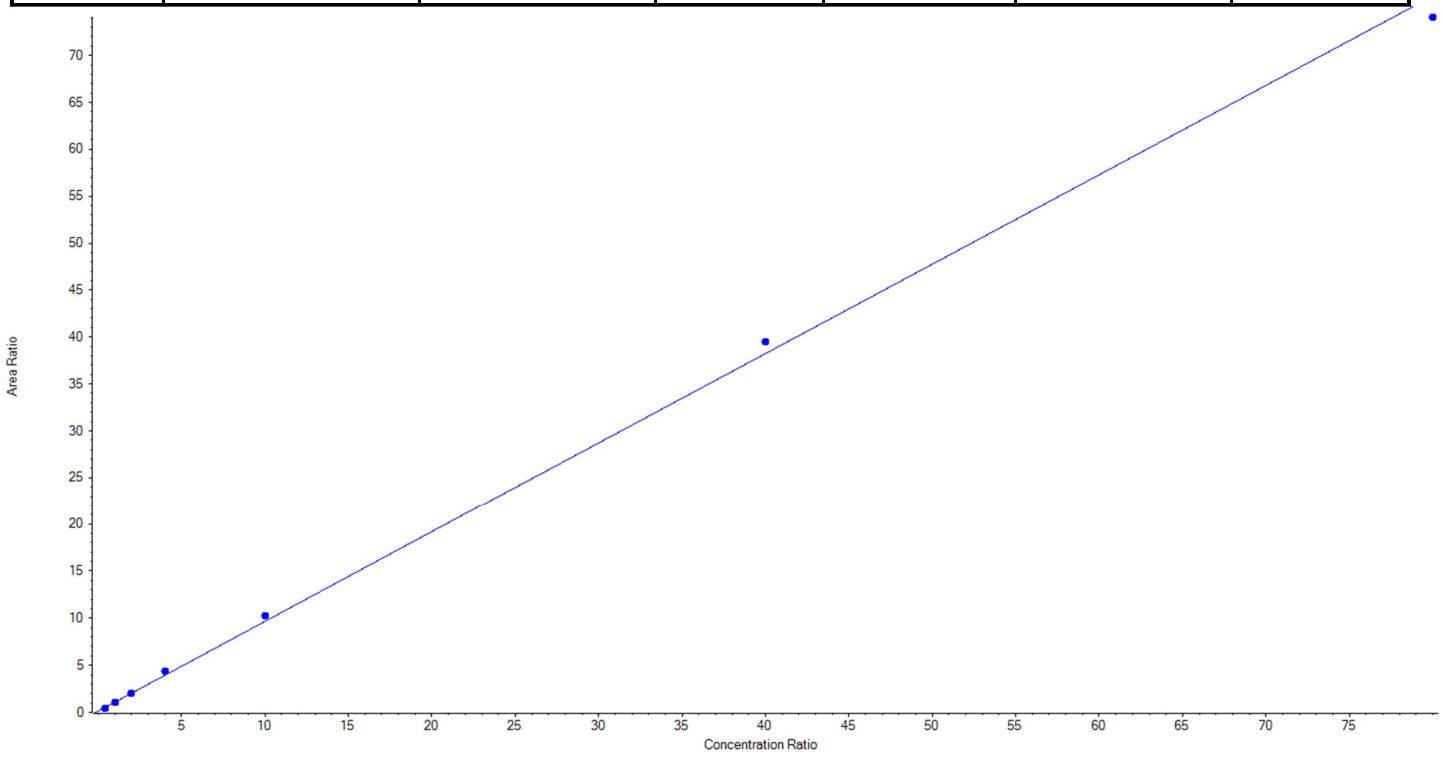
Analyte Name	PFTrDA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	663.0 / 619.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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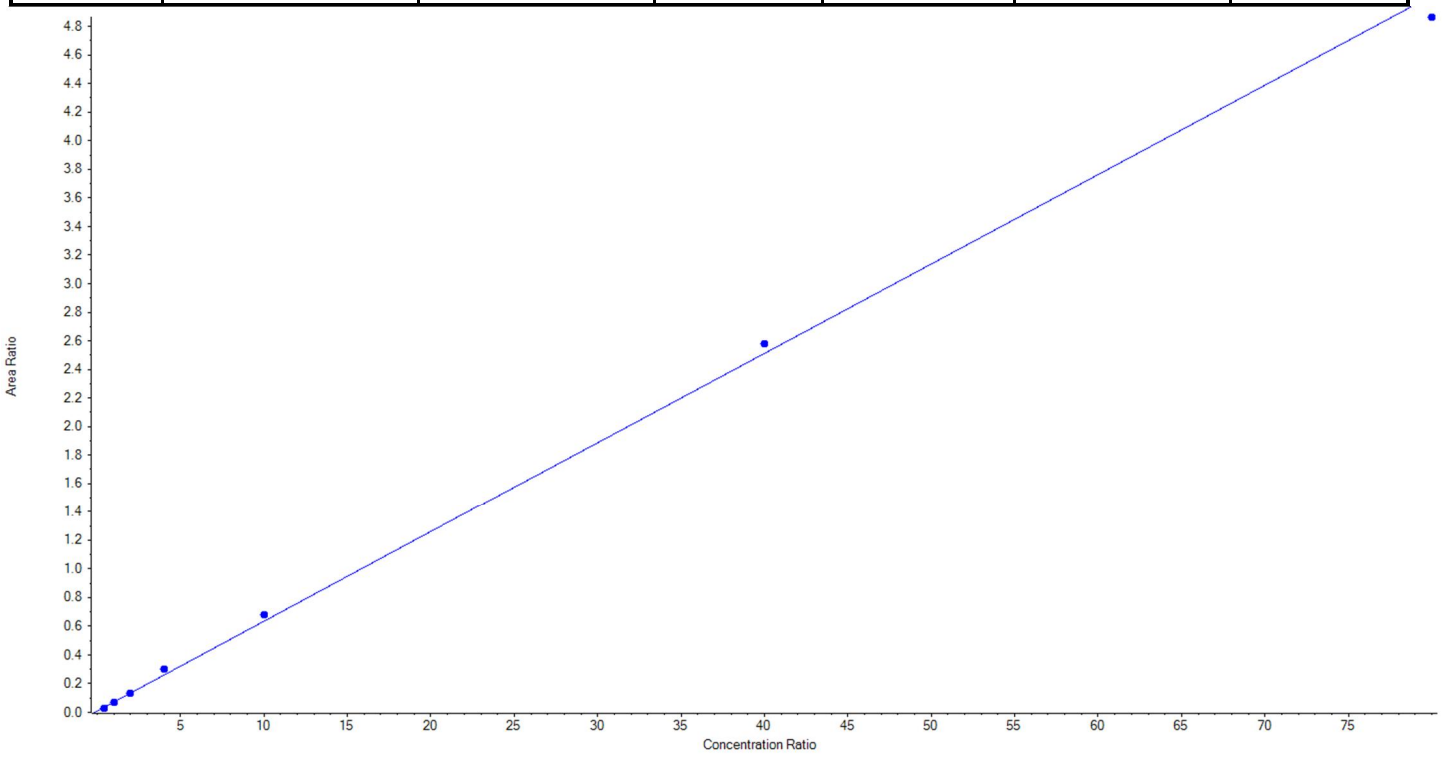
Analyte Name	PFTrDA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	663.0 / 169.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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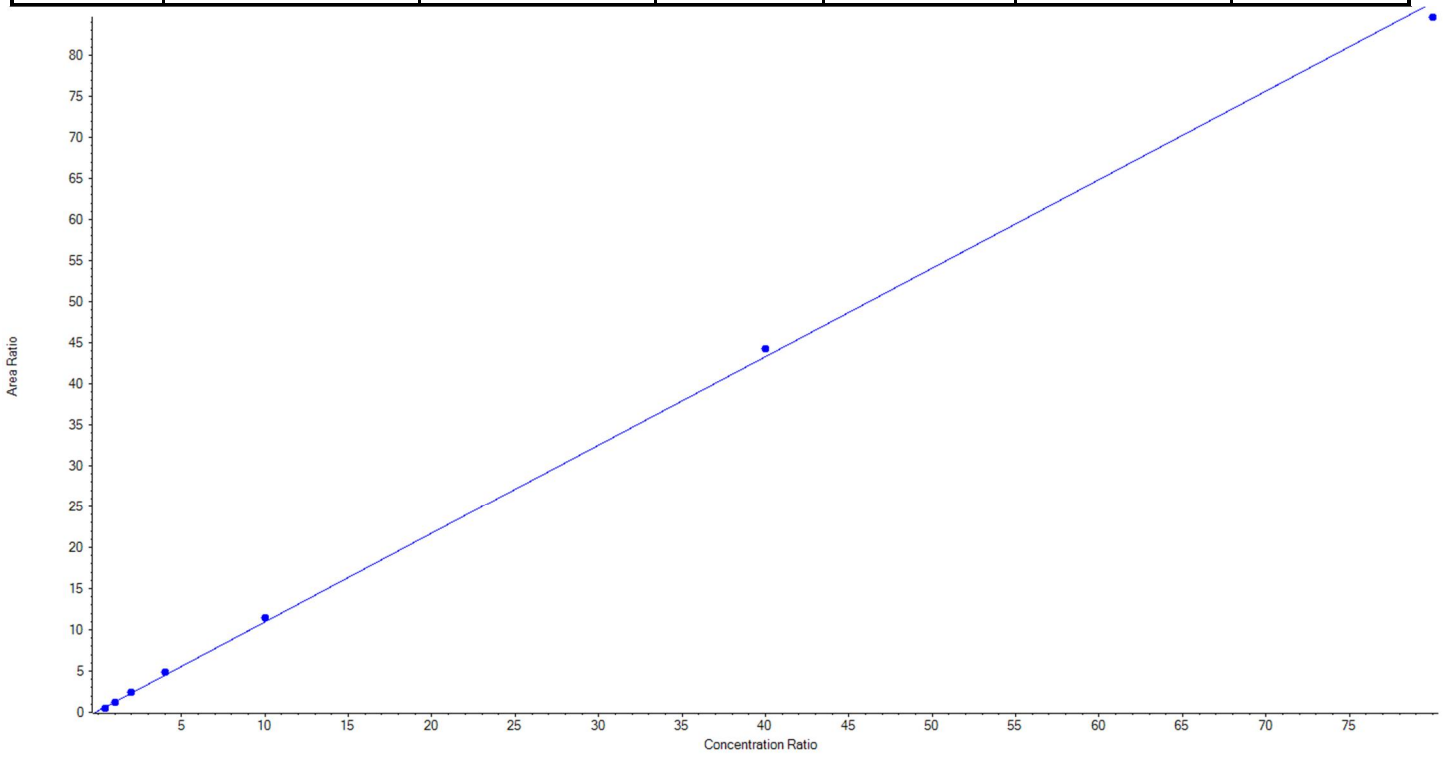
Analyte Name	PFTeDA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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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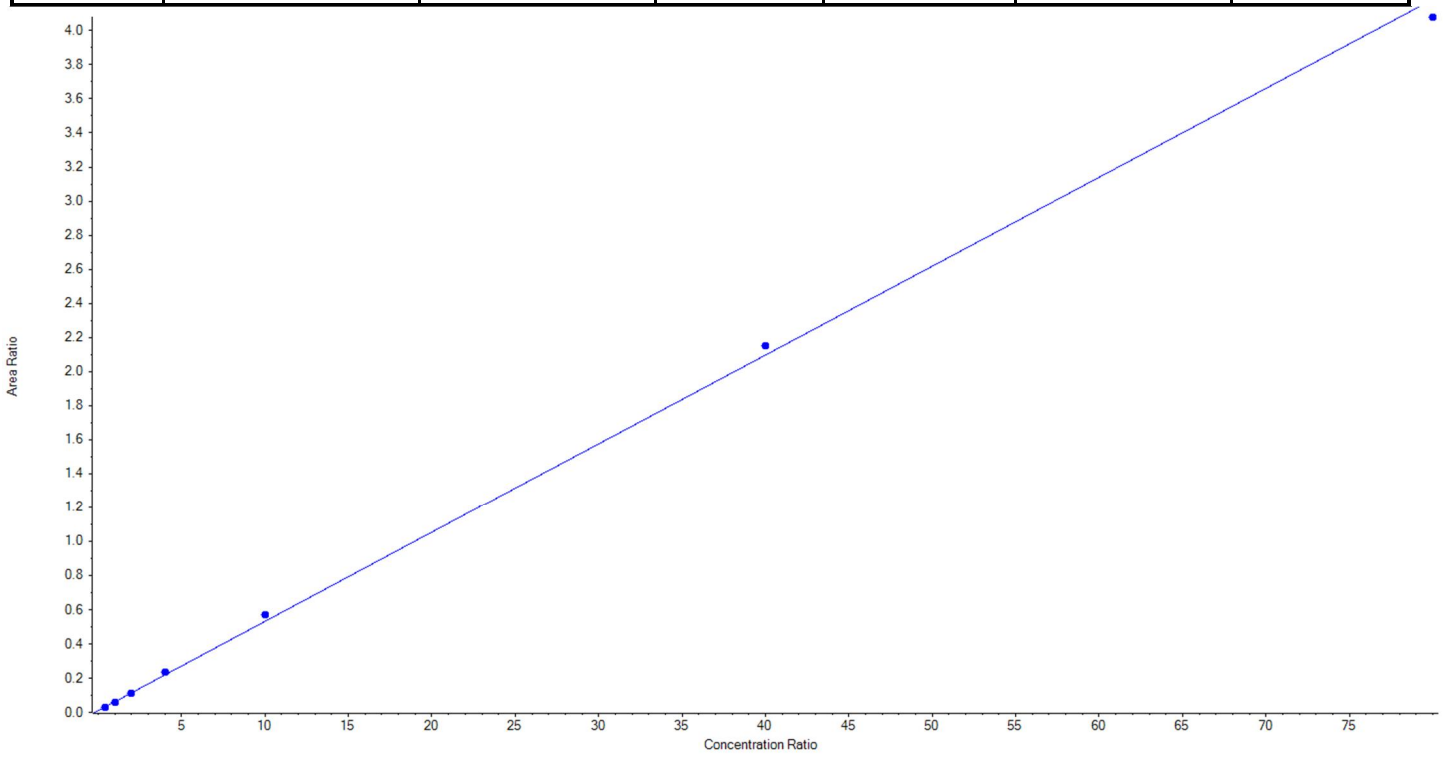
Analyte Name	PFTeDA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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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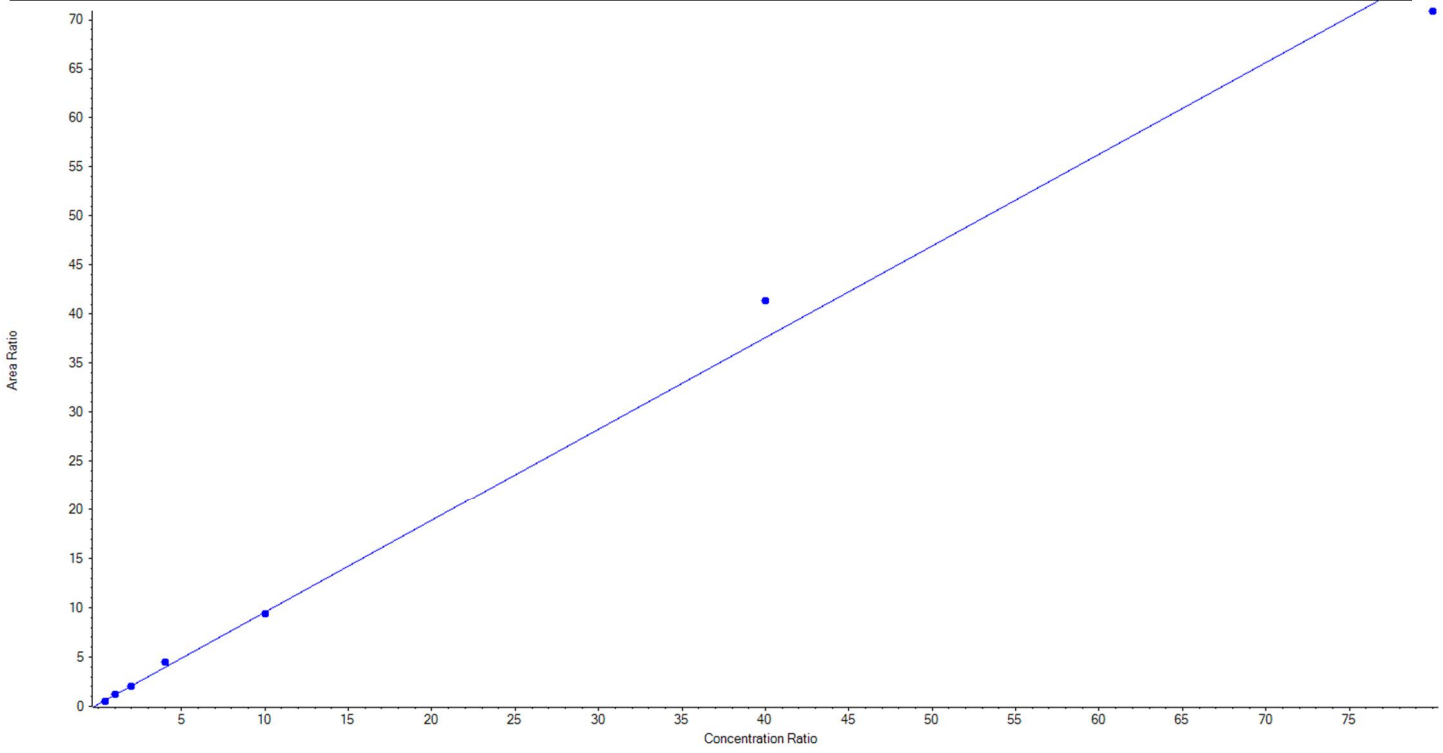
Analyte Name	NMeFOSAA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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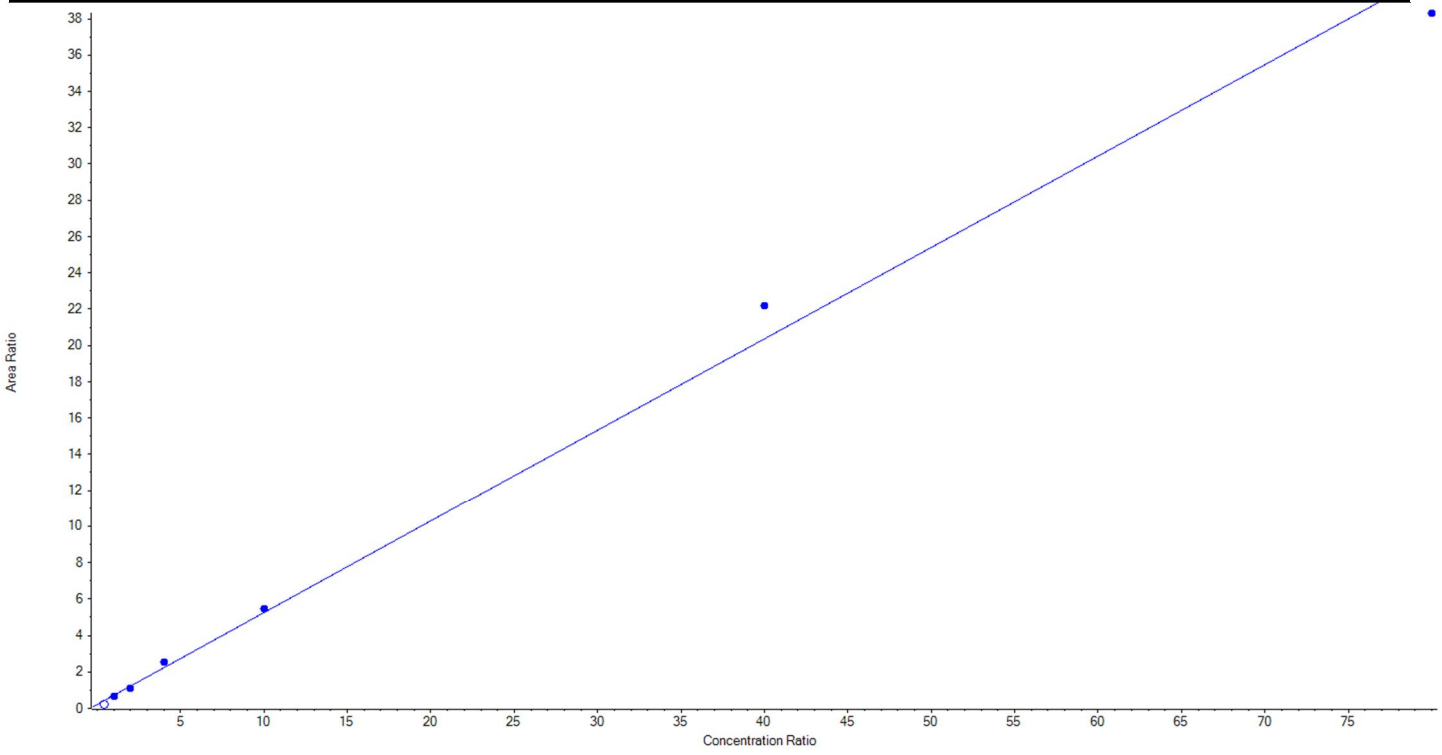
Analyte Name	NMeFOSAA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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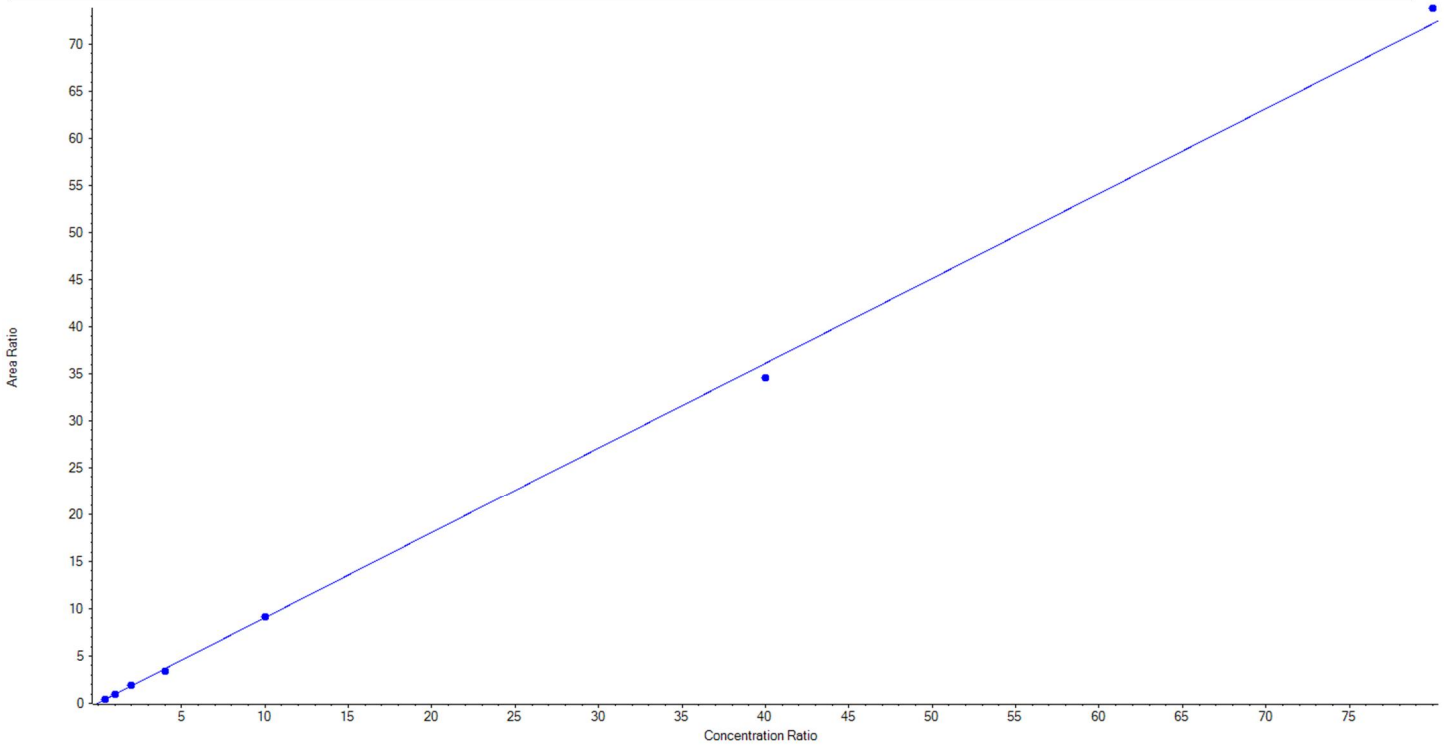
Analyte Name	NEtFOSAA_1	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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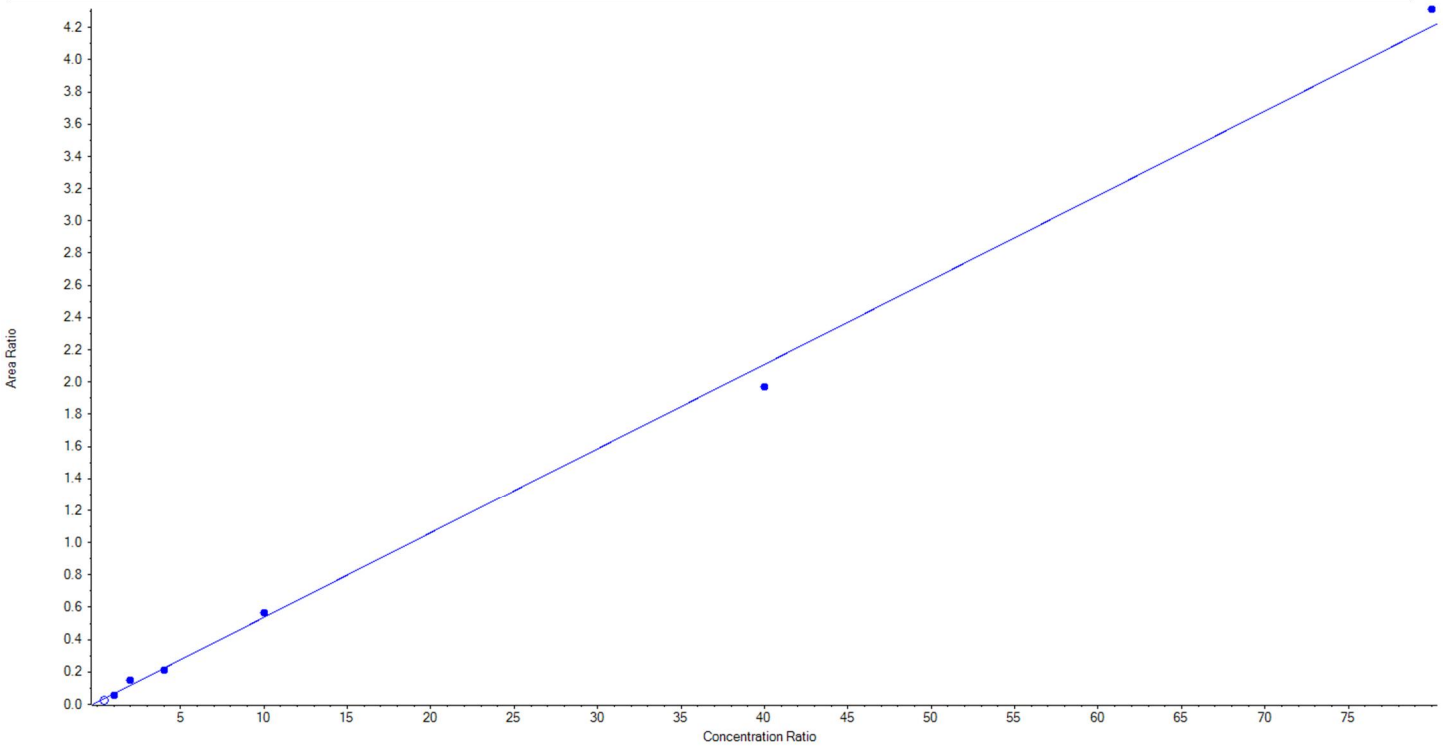
Analyte Name	NEtFOSAA_2	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0610_18-0611_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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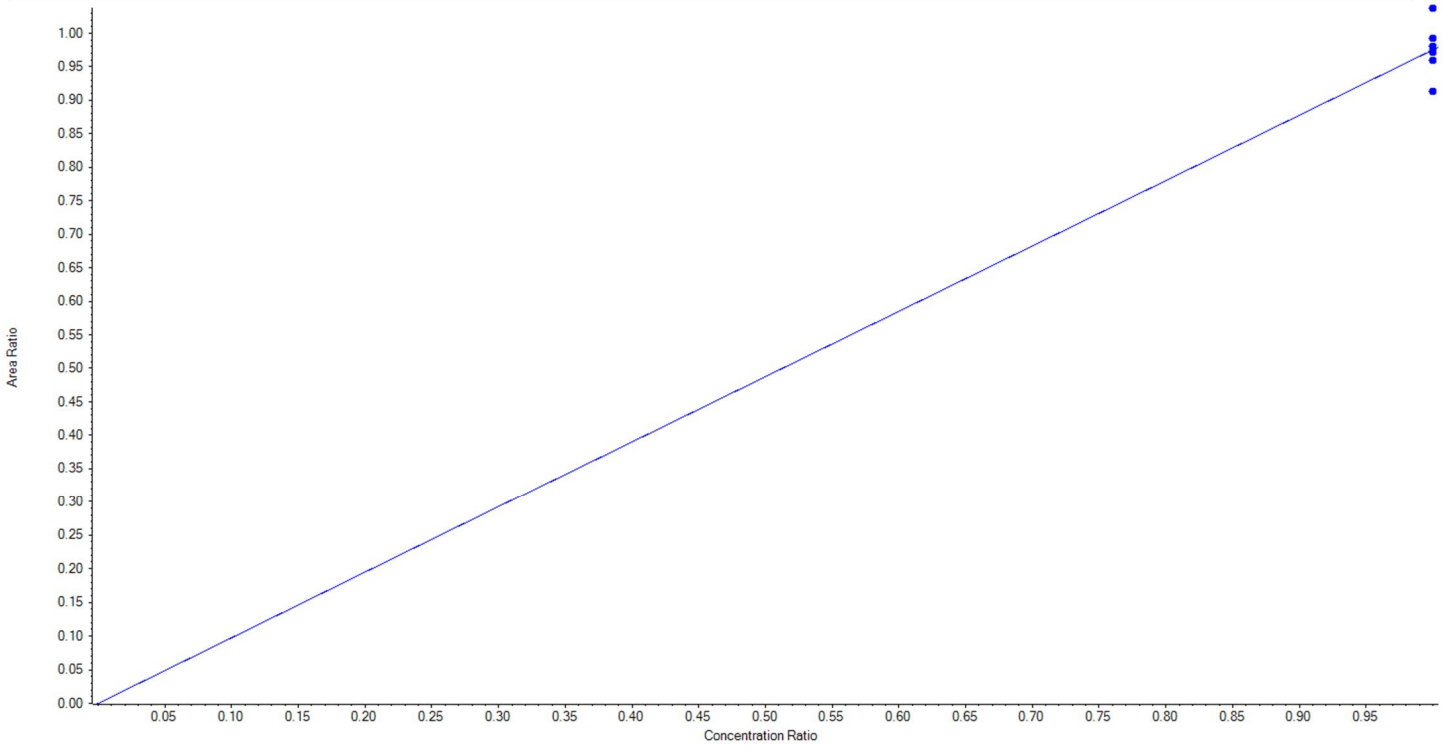
Analyte Name	13C2-PFDoA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	615.0 / 570.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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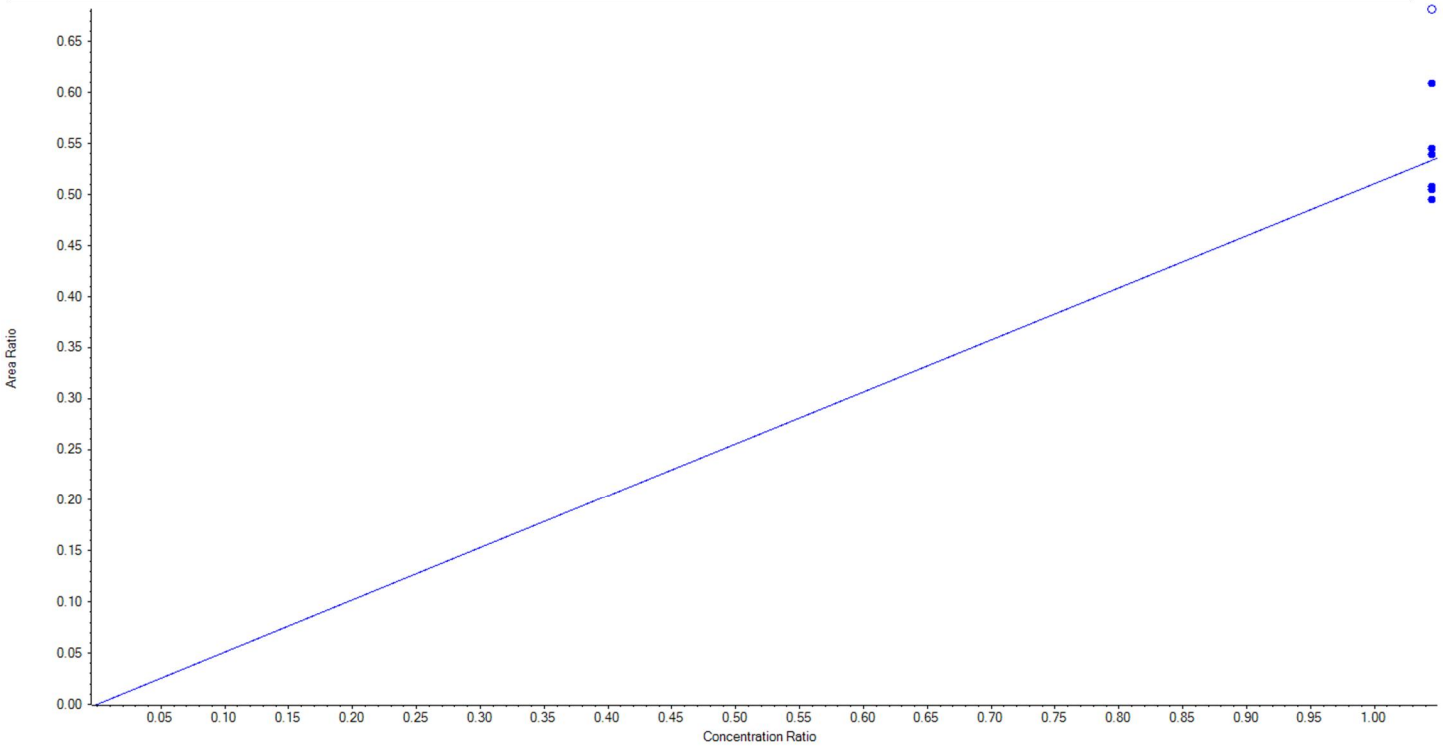
Analyte Name	d3-MeFOSAA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	573.0 / 419.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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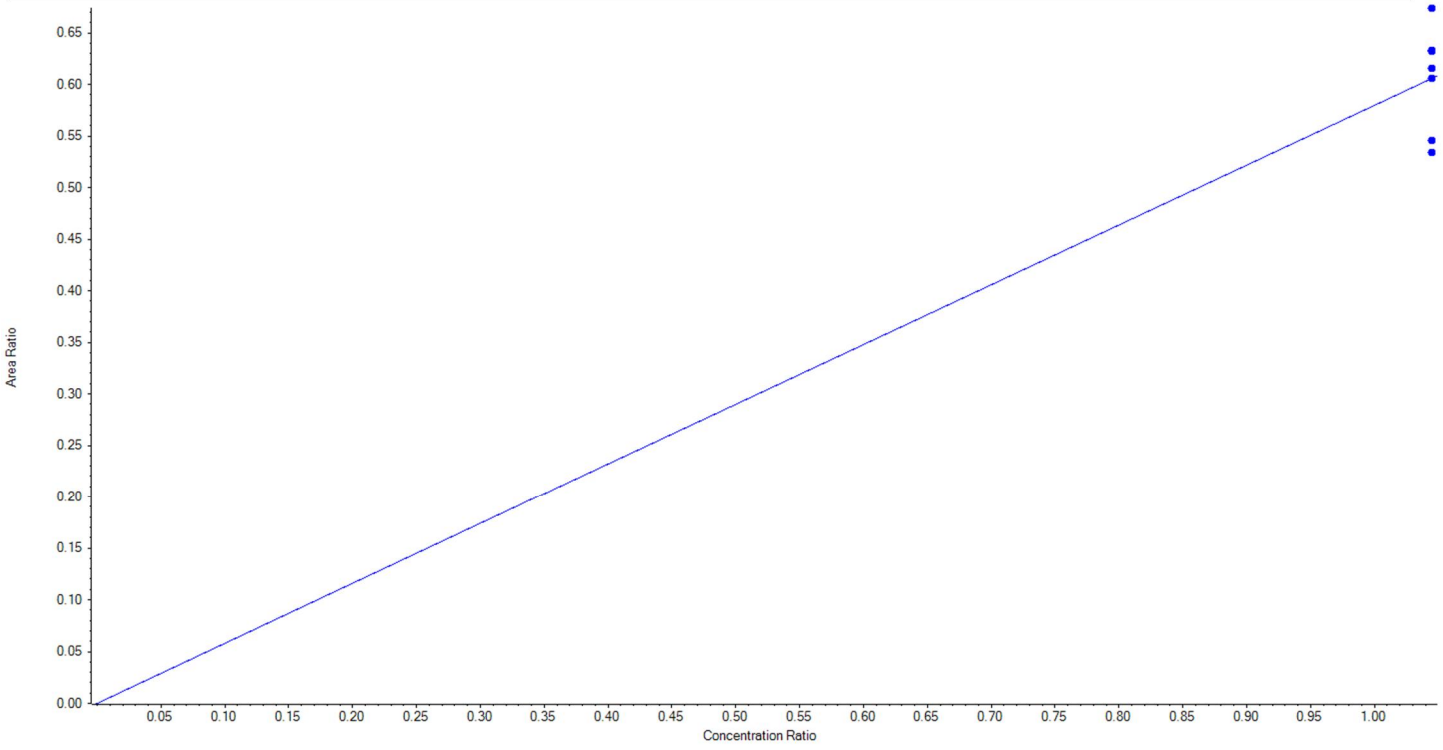
Analyte Name	d5-EtFOSAA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	589.0 / 419.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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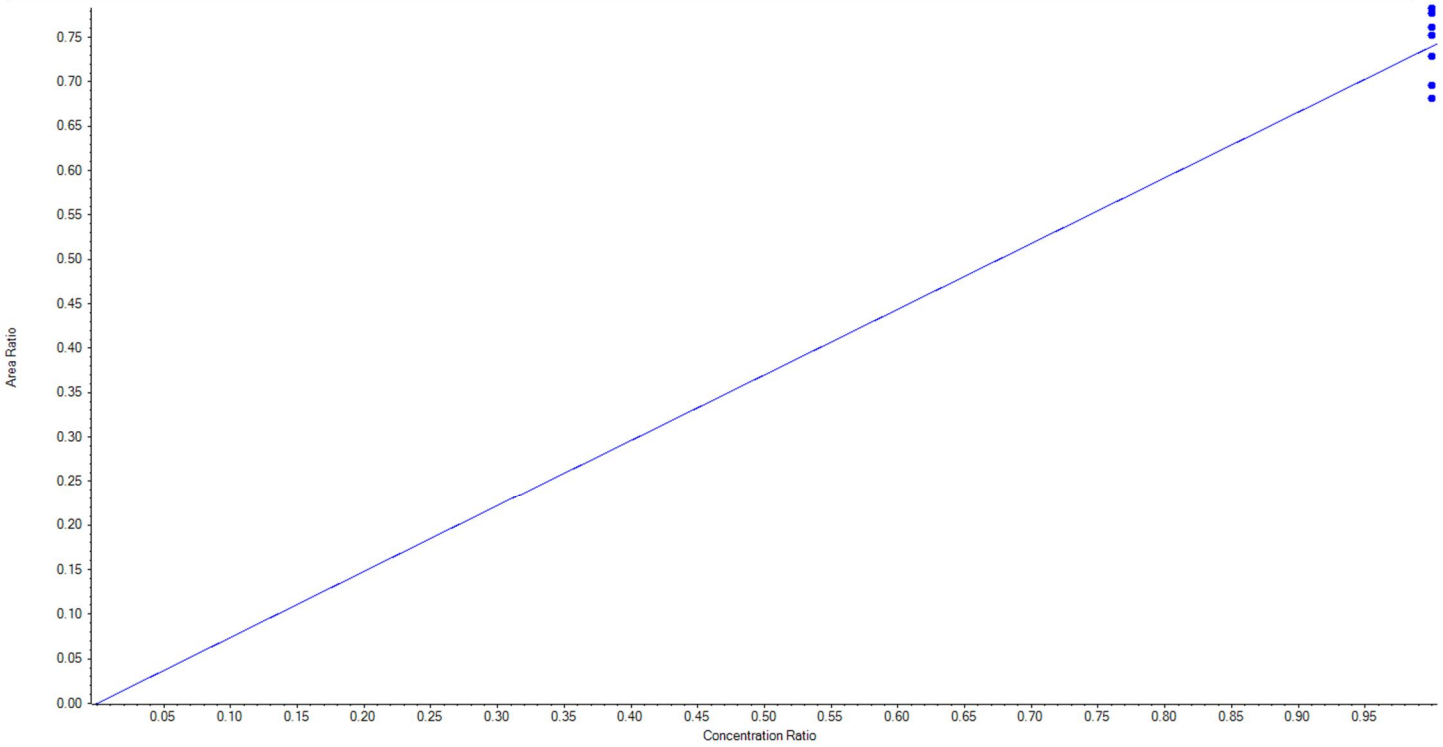
Analyte Name	13C5-PFHxA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	318.0 / 273.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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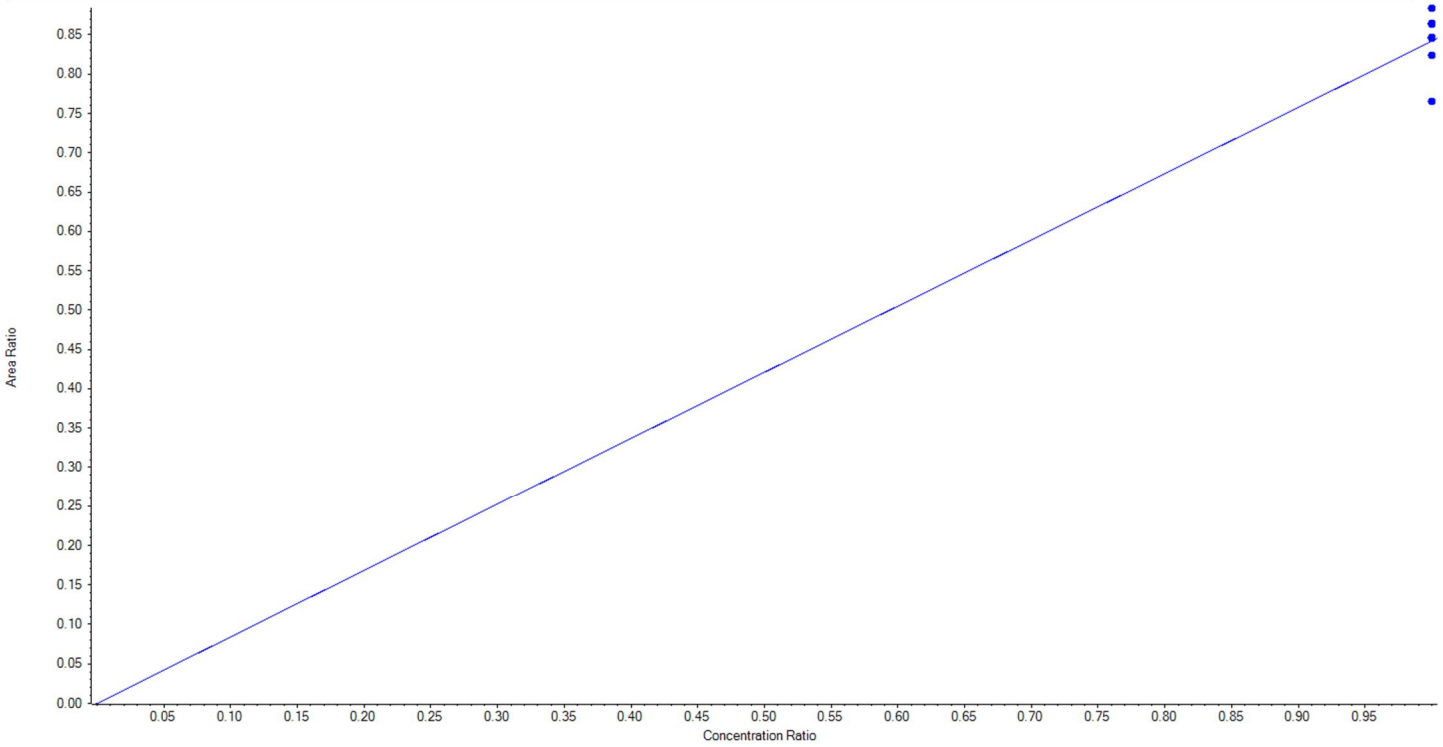
Analyte Name	13C4-PFHpA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	367.0 / 322.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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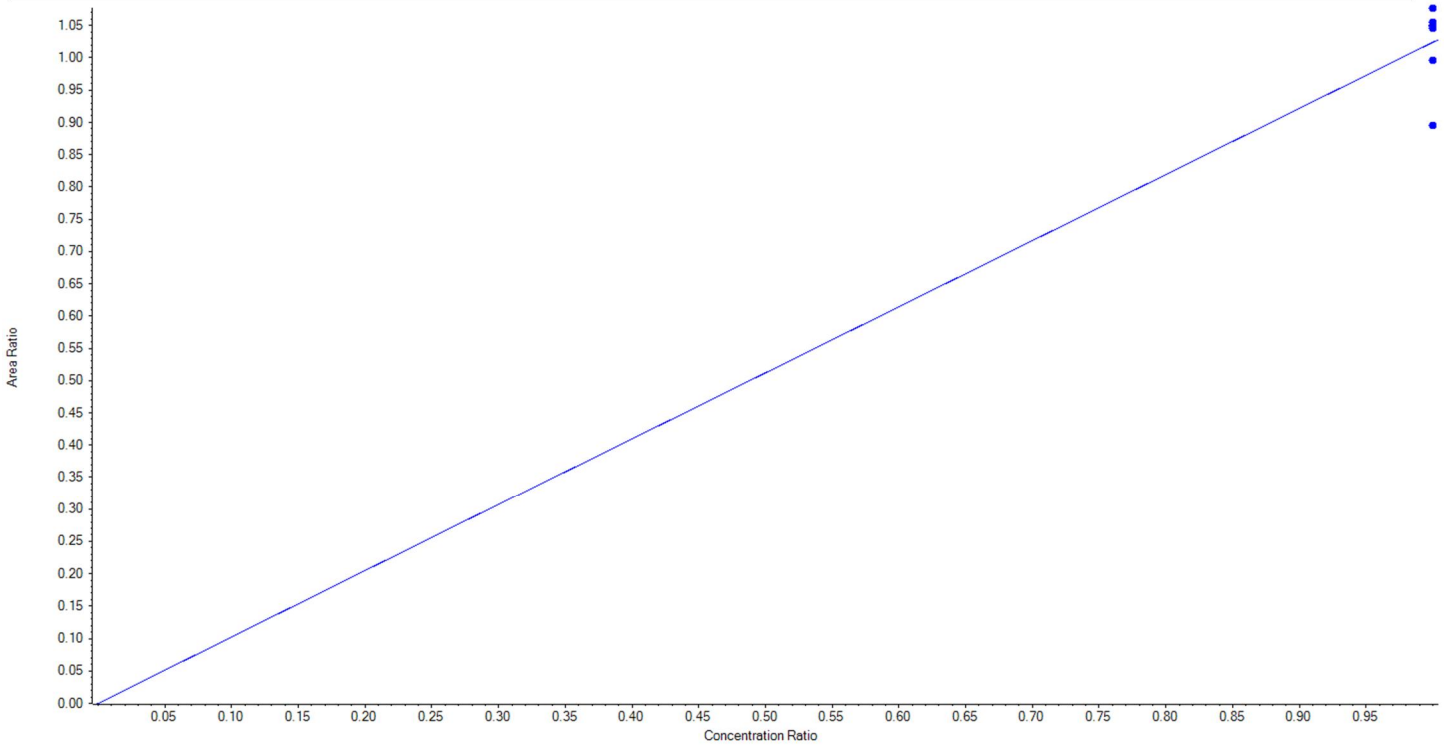
Analyte Name	13C8-PFOA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	421.0 / 376.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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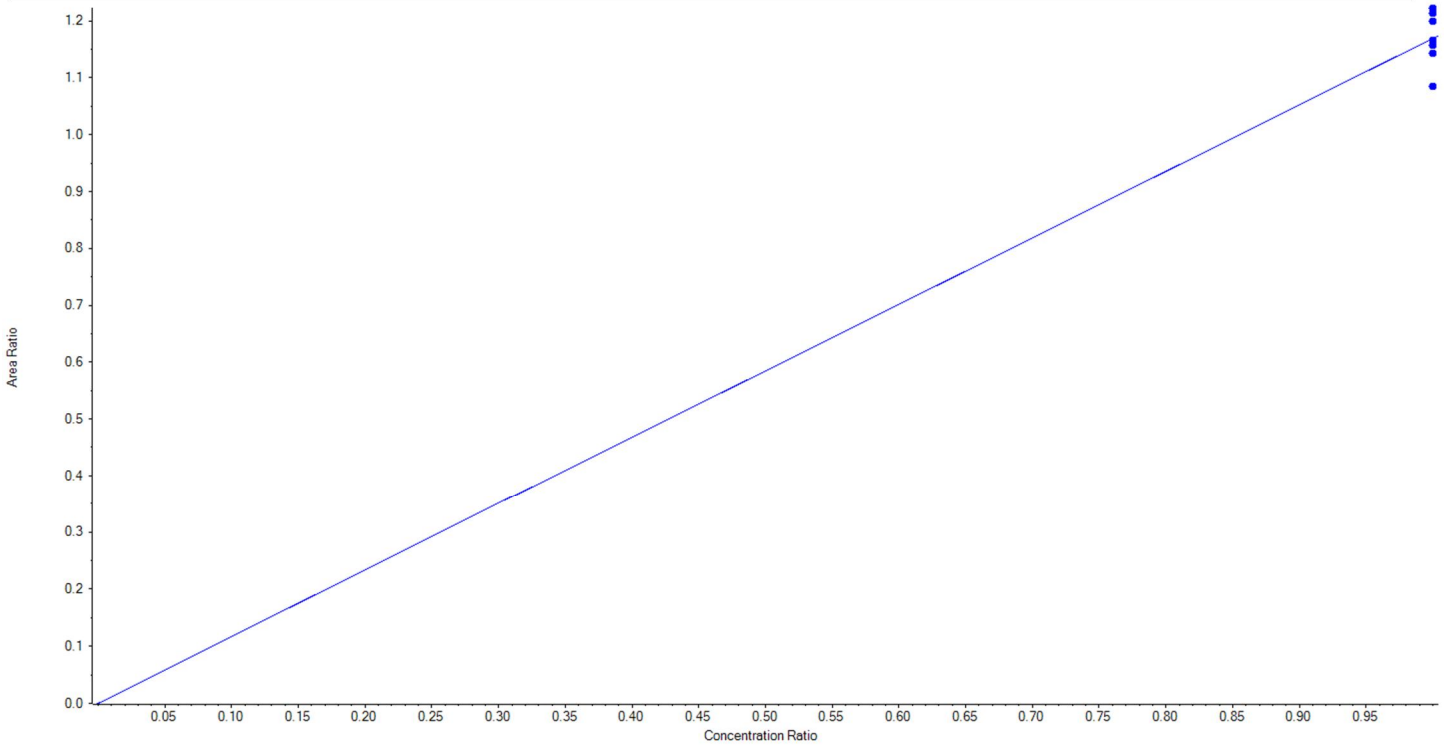
Analyte Name	13C9-PFNA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	472.0 / 427.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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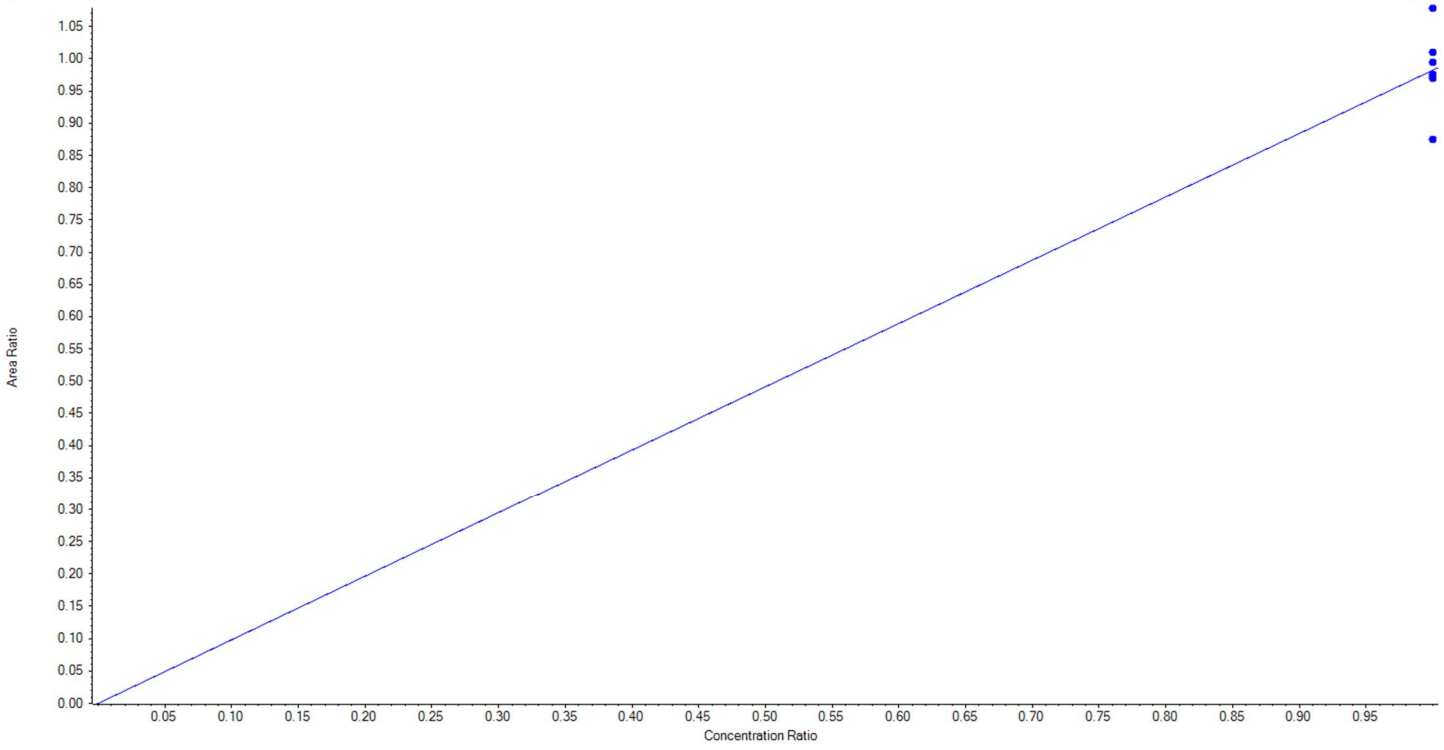
Analyte Name	13C6-PFDA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	519.0 / 474.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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

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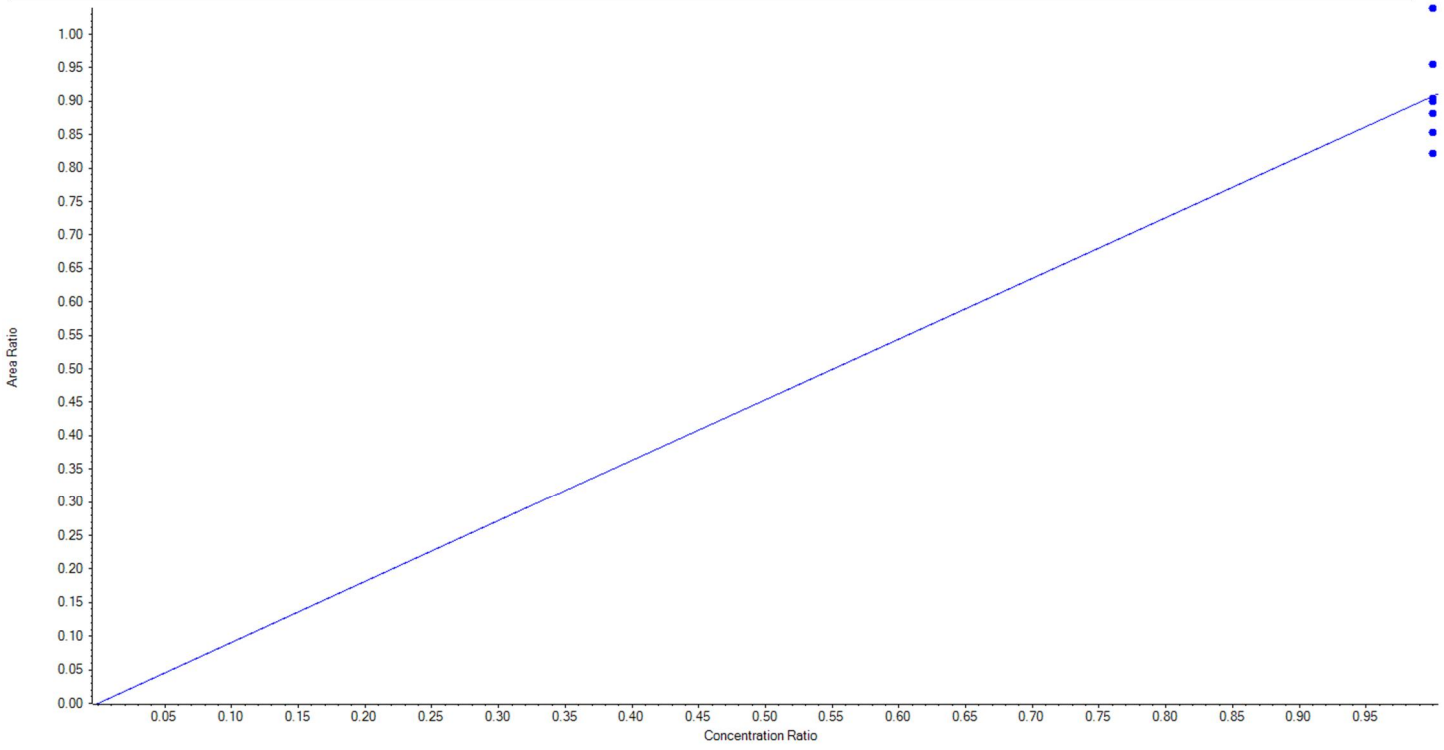
Analyte Name	13C7-PFUnA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	570.0 / 525.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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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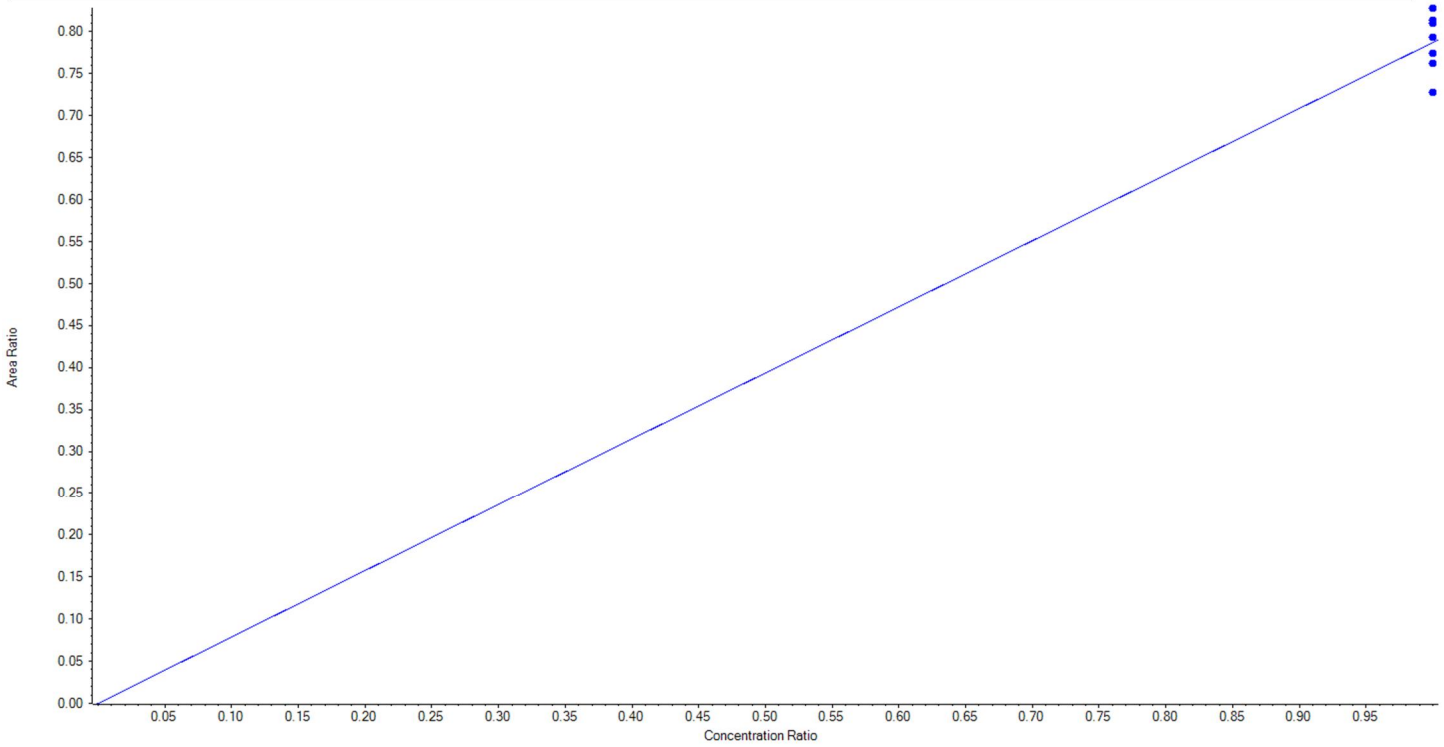
Analyte Name	13C2-PFTeDA	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	715.0 / 670.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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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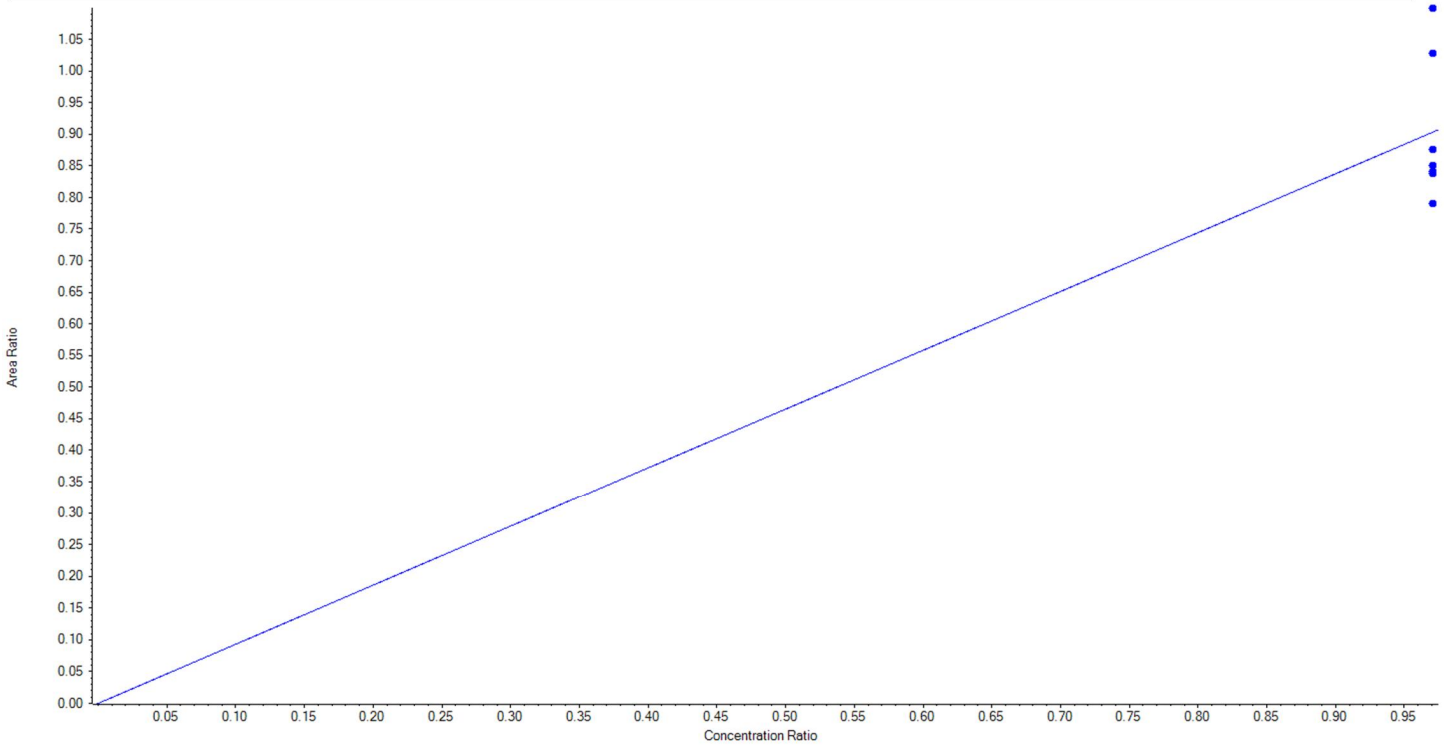
Calibration Summary Report

Created with Analyst Reporter
Printed: 24/10/2018 1:09:45 PM

Analyte Name	13C3-PFBS	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	302.0 / 99.0	**Result Table**	18-0610_18-0611_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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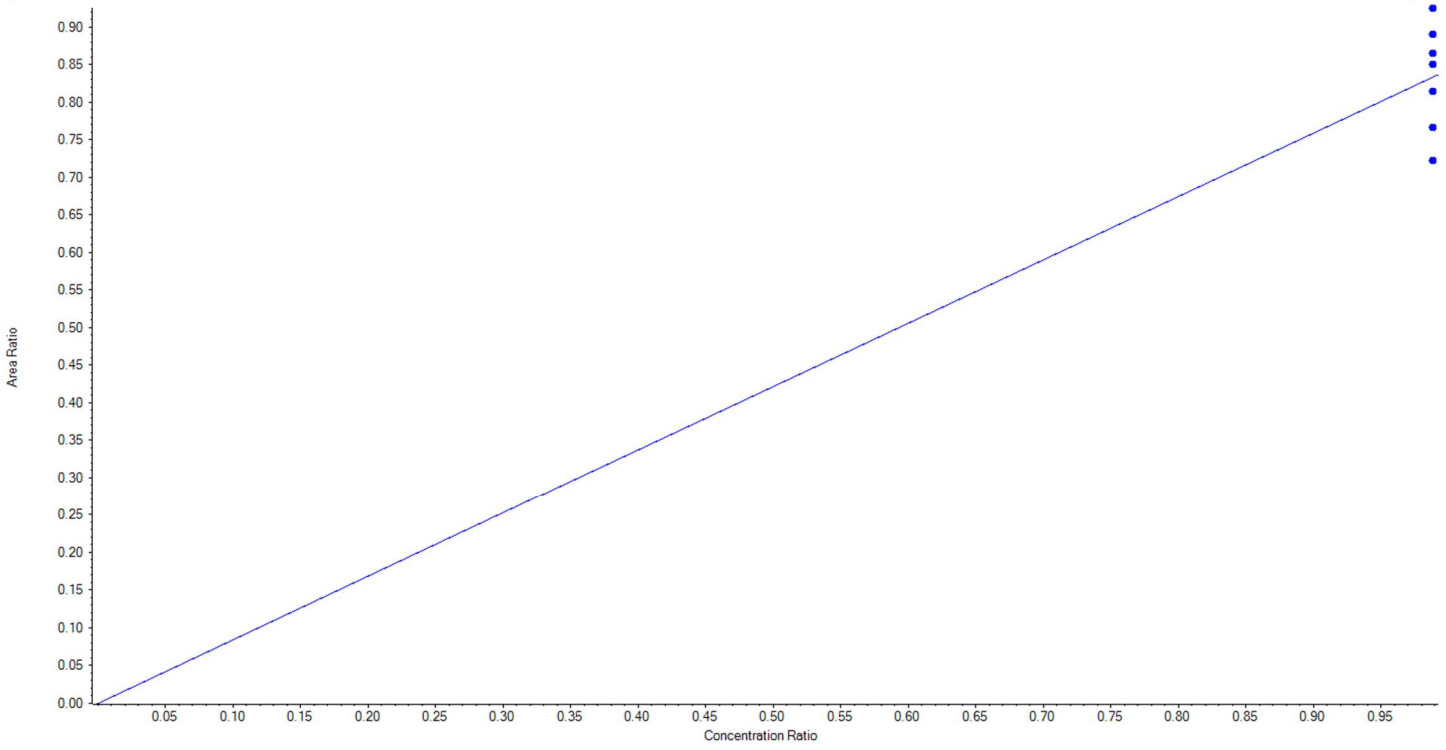
Analyte Name	13C3-PFHxS	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	402.0 / 99.0	**Result Table**	18-0610_18-0611_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/17/2018 7:36:00 PM	**Acquisition Method**	5-0369.dam

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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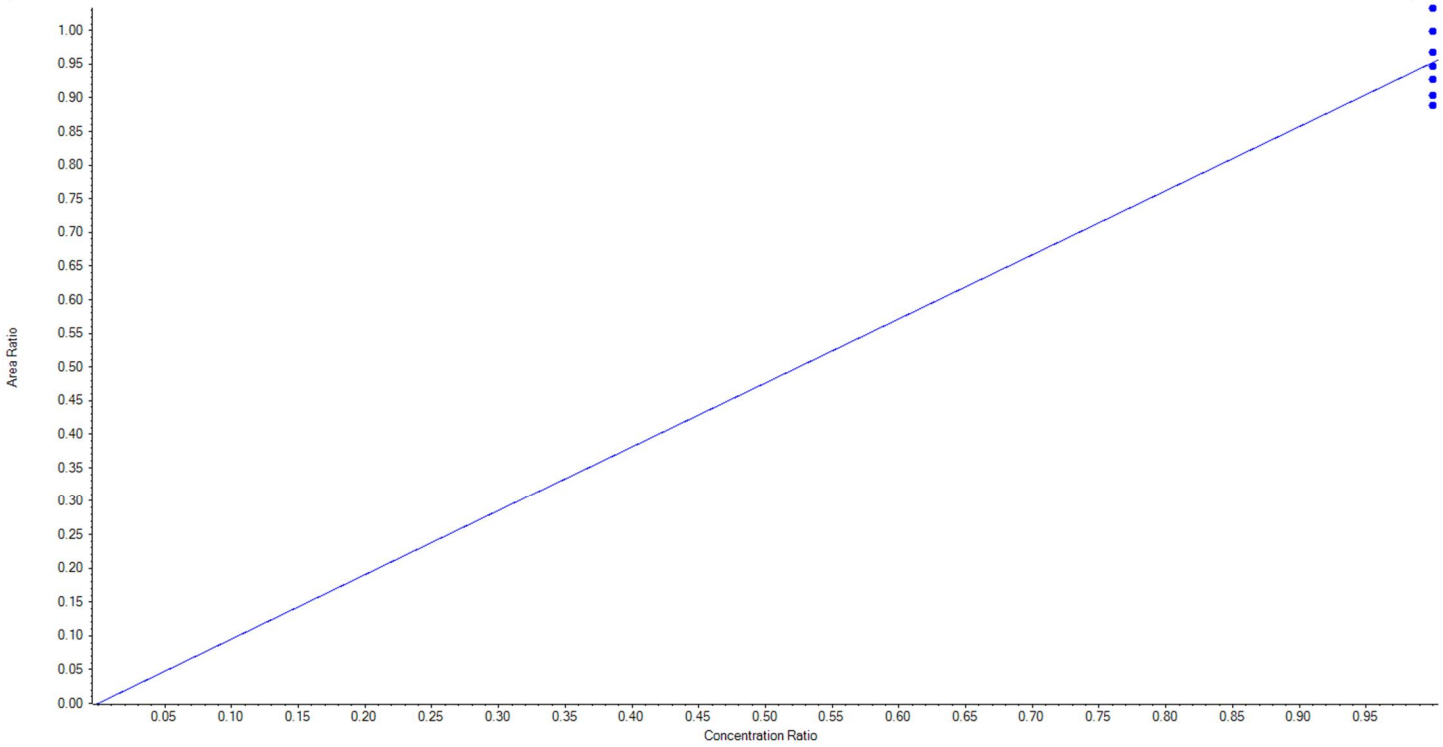
Calibration Summary Report

Created with Analyst Reporter
Printed: 24/10/2018 1:09:45 PM

Analyte Name	13C8-PFOS	**Data File**	Data18-0590_18-01588_18-0589.wiff
MRM Transition	507.0 / 99.0	**Result Table**	18-0610_18-0611_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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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**	18-0610_18-0611_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**	18-0610_18-0611_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

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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**	18-0610_18-0611_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

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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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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

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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**	18-0610_18-0611_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**	18-0610_18-0611_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

BATTELLE

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**	18-0610_18-0611_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

BATTELLE

Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:11:02 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**	18-0610_18-0611_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

Created with Analyst Reporter
Printed: 24/10/2018 1:11:07 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**	18-0610_18-0611_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**	18-0610_18-0611_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

BATTELLE

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**	18-0610_18-0611_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

BATTELLE

Summary Ion Ratio Report

Created with Analyst Reporter
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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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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

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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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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**	18-0610_18-0611_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	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.57	502.963491	505.00	99.60
PFBS_2	298.9 / 99.0	1.57	496.453145	505.00	98.31
PFHxA_1	313.0 / 269.0	1.91	480.896992	505.00	95.23
PFHxA_2	313.0 / 119.0	1.91	485.682826	505.00	96.17
PFHpA_1	363.0 / 319.0	2.33	481.224420	500.00	96.24
PFHpA_2	363.0 / 169.0	2.32	452.441038	500.00	90.49
PFHxS_1	399.0 / 80.0	2.35	518.322649	505.00	102.64
PFHxS_2	399.0 / 99.0	2.35	520.806905	505.00	103.13
PFOA_1	413.0 / 369.0	2.74	450.789129	500.00	90.16
PFOA_2	413.0 / 169.0	2.74	546.555914	500.00	109.31
PFNA_1	463.0 / 419.0	3.14	494.521439	500.00	98.90
PFNA_2	463.0 / 219.0	3.14	507.732683	500.00	101.55
PFOS_1	499.0 / 80.0	3.14	441.273324	500.00	88.25
PFOS_2	499.0 / 99.0	3.14	470.431215	500.00	94.09
PFDA_1	513.0 / 469.0	3.50	451.709750	500.00	90.34
PFDA_2	513.0 / 219.0	3.50	556.902124	500.00	111.38
PFUnA_1	563.0 / 519.0	3.83	457.038917	500.00	91.41
PFUnA_2	563.0 / 269.0	3.83	585.085583	500.00	117.02
PFDoA_1	613.0 / 569.0	4.11	507.066970	500.00	101.41
PFDoA_2	613.0 / 319.0	4.11	531.157147	500.00	106.23
PFTrDA_1	663.0 / 619.0	4.36	452.740787	500.00	90.55
PFTrDA_2	663.0 / 169.0	4.36	467.337333	500.00	93.47
PFTeDA_1	713.0 / 669.0	4.58	504.192869	500.00	100.84
PFTeDA_2	713.0 / 169.0	4.58	503.867021	500.00	100.77
NMeFOSAA_1	570.0 / 419.0	3.66	429.345311	500.00	85.87
NMeFOSAA_2	570.0 / 512.0	3.66	376.857105	500.00	75.37
NEtFOSAA_1	584.0 / 419.0	3.82	419.389608	500.00	83.88
NEtFOSAA_2	584.0 / 483.0	3.81	616.043667	500.00	123.21

Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.55	986.691854	1010.00	97.69
PFBS_2	298.9 / 99.0	1.55	1061.248612	1010.00	105.07
PFHxA_1	313.0 / 269.0	1.87	966.012728	1010.00	95.64
PFHxA_2	313.0 / 119.0	1.87	827.216460	1010.00	81.90
PFHpA_1	363.0 / 319.0	2.28	1004.898918	1000.00	100.49
PFHpA_2	363.0 / 169.0	2.27	950.708776	1000.00	95.07
PFHxS_1	399.0 / 80.0	2.30	1072.365734	1010.00	106.17
PFHxS_2	399.0 / 99.0	2.30	1086.321195	1010.00	107.56
PFOA_1	413.0 / 369.0	2.68	1035.491532	1000.00	103.55
PFOA_2	413.0 / 169.0	2.68	857.036091	1000.00	85.70
PFNA_1	463.0 / 419.0	3.08	1047.997138	1000.00	104.80
PFNA_2	463.0 / 219.0	3.08	1077.037555	1000.00	107.70
PFOS_1	499.0 / 80.0	3.08	982.860895	1000.00	98.29
PFOS_2	499.0 / 99.0	3.08	1020.364587	1000.00	102.04
PFDA_1	513.0 / 469.0	3.43	1009.965193	1000.00	101.00
PFDA_2	513.0 / 219.0	3.43	952.774350	1000.00	95.28
PFUnA_1	563.0 / 519.0	3.76	1020.238968	1000.00	102.02
PFUnA_2	563.0 / 269.0	3.75	1053.764625	1000.00	105.38
PFDoA_1	613.0 / 569.0	4.03	976.057556	1000.00	97.61
PFDoA_2	613.0 / 319.0	4.03	954.388605	1000.00	95.44
PFTrDA_1	663.0 / 619.0	4.28	1089.692092	1000.00	108.97
PFTrDA_2	663.0 / 169.0	4.27	1042.502485	1000.00	104.25
PFTeDA_1	713.0 / 669.0	4.49	1046.607861	1000.00	104.66
PFTeDA_2	713.0 / 169.0	4.49	1041.898346	1000.00	104.19
NMeFOSAA_1	570.0 / 419.0	3.59	1042.149783	1000.00	104.21
NMeFOSAA_2	570.0 / 512.0	3.59	920.903758	1000.00	92.09
NEtFOSAA_1	584.0 / 419.0	3.75	925.608913	1000.00	92.56
NEtFOSAA_2	584.0 / 483.0	3.76	1014.791195	1000.00	101.48

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QC Summary Report

Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2467.382818	2525.00	97.72
PFBS_2	298.9 / 99.0	1.54	2461.939229	2525.00	97.50
PFHxA_1	313.0 / 269.0	1.86	2480.474155	2525.00	98.24
PFHxA_2	313.0 / 119.0	1.86	2366.151308	2525.00	93.71
PFHpA_1	363.0 / 319.0	2.27	2389.668045	2500.00	95.59
PFHpA_2	363.0 / 169.0	2.27	2414.467264	2500.00	96.58
PFHxS_1	399.0 / 80.0	2.29	2669.892528	2525.00	105.74
PFHxS_2	399.0 / 99.0	2.29	2782.451160	2525.00	110.20
PFOA_1	413.0 / 369.0	2.67	2360.661425	2500.00	94.43
PFOA_2	413.0 / 169.0	2.67	2210.661572	2500.00	88.43
PFNA_1	463.0 / 419.0	3.07	2619.471299	2500.00	104.78
PFNA_2	463.0 / 219.0	3.07	2668.690625	2500.00	106.75
PFOS_1	499.0 / 80.0	3.07	2482.246979	2500.00	99.29
PFOS_2	499.0 / 99.0	3.07	2439.552215	2500.00	97.58
PFDA_1	513.0 / 469.0	3.42	2522.317324	2500.00	100.89
PFDA_2	513.0 / 219.0	3.42	2456.565460	2500.00	98.26
PFUnA_1	563.0 / 519.0	3.75	2462.919479	2500.00	98.52
PFUnA_2	563.0 / 269.0	3.74	2554.395191	2500.00	102.18
PFDoA_1	613.0 / 569.0	4.03	2721.077969	2500.00	108.84
PFDoA_2	613.0 / 319.0	4.03	2626.510884	2500.00	105.06
PFTrDA_1	663.0 / 619.0	4.27	2622.783170	2500.00	104.91
PFTrDA_2	663.0 / 169.0	4.27	2644.151384	2500.00	105.77
PFTeDA_1	713.0 / 669.0	4.48	2498.323628	2500.00	99.93
PFTeDA_2	713.0 / 169.0	4.48	2489.286956	2500.00	99.57
NMeFOSAA_1	570.0 / 419.0	3.58	3071.487600	2500.00	122.86
NMeFOSAA_2	570.0 / 512.0	3.58	2927.700231	2500.00	117.11
NEtFOSAA_1	584.0 / 419.0	3.74	2615.489918	2500.00	104.62
NEtFOSAA_2	584.0 / 483.0	3.74	2727.090637	2500.00	109.08

Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1050.169568	1010.00	103.98
PFBS_2	298.9 / 99.0	1.54	1091.167211	1010.00	108.04
PFHxA_1	313.0 / 269.0	1.86	1003.116046	1010.00	99.32
PFHxA_2	313.0 / 119.0	1.86	1135.090531	1010.00	112.39
PFHpA_1	363.0 / 319.0	2.27	943.074036	1000.00	94.31
PFHpA_2	363.0 / 169.0	2.26	635.830740	1000.00	63.58
PFHxS_1	399.0 / 80.0	2.29	1039.795327	1010.00	102.95
PFHxS_2	399.0 / 99.0	2.29	1069.336866	1010.00	105.87
PFOA_1	413.0 / 369.0	2.68	973.668240	1000.00	97.37
PFOA_2	413.0 / 169.0	2.68	897.093852	1000.00	89.71
PFNA_1	463.0 / 419.0	3.07	1066.438195	1000.00	106.64
PFNA_2	463.0 / 219.0	3.07	1071.725175	1000.00	107.17
PFOS_1	499.0 / 80.0	3.07	889.229567	1000.00	88.92
PFOS_2	499.0 / 99.0	3.07	955.970166	1000.00	95.60
PFDA_1	513.0 / 469.0	3.42	946.540151	1000.00	94.65
PFDA_2	513.0 / 219.0	3.42	1019.541475	1000.00	101.95
PFUnA_1	563.0 / 519.0	3.74	909.427833	1000.00	90.94
PFUnA_2	563.0 / 269.0	3.74	1046.392611	1000.00	104.64
PFDoA_1	613.0 / 569.0	4.02	1030.064928	1000.00	103.01
PFDoA_2	613.0 / 319.0	4.02	1060.210548	1000.00	106.02
PFTrDA_1	663.0 / 619.0	4.27	1120.516938	1000.00	112.05
PFTrDA_2	663.0 / 169.0	4.26	1135.022250	1000.00	113.50
PFTeDA_1	713.0 / 669.0	4.48	1046.899629	1000.00	104.69
PFTeDA_2	713.0 / 169.0	4.48	1028.720436	1000.00	102.87
NMeFOSAA_1	570.0 / 419.0	3.58	1290.162301	1000.00	129.02
NMeFOSAA_2	570.0 / 512.0	3.58	1119.168222	1000.00	111.92
NEtFOSAA_1	584.0 / 419.0	3.74	963.199773	1000.00	96.32
NEtFOSAA_2	584.0 / 483.0	3.73	1215.585830	1000.00	121.56

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QC Summary 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	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.59	522.412044	505.00	103.45
PFBS_2	298.9 / 99.0	1.59	527.407386	505.00	104.44
PFHxA_1	313.0 / 269.0	1.92	526.286139	505.00	104.22
PFHxA_2	313.0 / 119.0	1.93	425.768924	505.00	84.31
PFHpA_1	363.0 / 319.0	2.35	525.576092	500.00	105.12
PFHpA_2	363.0 / 169.0	2.35	650.577066	500.00	130.12
PFHxS_1	399.0 / 80.0	2.37	580.431109	505.00	114.94
PFHxS_2	399.0 / 99.0	2.37	566.843848	505.00	112.25
PFOA_1	413.0 / 369.0	2.77	551.340780	500.00	110.27
PFOA_2	413.0 / 169.0	2.77	559.312396	500.00	111.86
PFNA_1	463.0 / 419.0	3.17	546.390354	500.00	109.28
PFNA_2	463.0 / 219.0	3.17	584.690652	500.00	116.94
PFOS_1	499.0 / 80.0	3.17	445.794677	500.00	89.16
PFOS_2	499.0 / 99.0	3.17	436.065154	500.00	87.21
PFDA_1	513.0 / 469.0	3.54	518.182139	500.00	103.64
PFDA_2	513.0 / 219.0	3.54	519.865515	500.00	103.97
PFUnA_1	563.0 / 519.0	3.87	493.505176	500.00	98.70
PFUnA_2	563.0 / 269.0	3.86	687.882191	500.00	137.58
PFDoA_1	613.0 / 569.0	4.15	552.712418	500.00	110.54
PFDoA_2	613.0 / 319.0	4.15	541.203184	500.00	108.24
PFTrDA_1	663.0 / 619.0	4.41	475.958829	500.00	95.19
PFTrDA_2	663.0 / 169.0	4.40	507.588784	500.00	101.52
PFTeDA_1	713.0 / 669.0	4.63	530.281016	500.00	106.06
PFTeDA_2	713.0 / 169.0	4.63	567.072165	500.00	113.41
NMeFOSAA_1	570.0 / 419.0	3.70	427.351533	500.00	85.47
NMeFOSAA_2	570.0 / 512.0	3.69	469.356177	500.00	93.87
NEtFOSAA_1	584.0 / 419.0	3.86	646.516551	500.00	129.30
NEtFOSAA_2	584.0 / 483.0	3.85	664.485081	500.00	132.90

Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2549.465361	2525.00	100.97
PFBS_2	298.9 / 99.0	1.56	2540.889186	2525.00	100.63
PFHxA_1	313.0 / 269.0	1.88	2360.921742	2525.00	93.50
PFHxA_2	313.0 / 119.0	1.88	2373.209379	2525.00	93.99
PFHpA_1	363.0 / 319.0	2.30	2329.653906	2500.00	93.19
PFHpA_2	363.0 / 169.0	2.30	2357.069111	2500.00	94.28
PFHxS_1	399.0 / 80.0	2.32	2372.260114	2525.00	93.95
PFHxS_2	399.0 / 99.0	2.32	2370.921317	2525.00	93.90
PFOA_1	413.0 / 369.0	2.71	2406.159139	2500.00	96.25
PFOA_2	413.0 / 169.0	2.71	2433.312080	2500.00	97.33
PFNA_1	463.0 / 419.0	3.11	2595.199327	2500.00	103.81
PFNA_2	463.0 / 219.0	3.11	2632.907443	2500.00	105.32
PFOS_1	499.0 / 80.0	3.11	2218.967210	2500.00	88.76
PFOS_2	499.0 / 99.0	3.11	2336.176207	2500.00	93.45
PFDA_1	513.0 / 469.0	3.47	2410.275241	2500.00	96.41
PFDA_2	513.0 / 219.0	3.47	2450.517200	2500.00	98.02
PFUnA_1	563.0 / 519.0	3.80	2263.956723	2500.00	90.56
PFUnA_2	563.0 / 269.0	3.79	2404.215463	2500.00	96.17
PFDoA_1	613.0 / 569.0	4.07	2547.348660	2500.00	101.89
PFDoA_2	613.0 / 319.0	4.07	2769.874878	2500.00	110.79
PFTrDA_1	663.0 / 619.0	4.32	2712.546224	2500.00	108.50
PFTrDA_2	663.0 / 169.0	4.32	2725.618153	2500.00	109.02
PFTeDA_1	713.0 / 669.0	4.54	2696.903800	2500.00	107.88
PFTeDA_2	713.0 / 169.0	4.53	2817.621695	2500.00	112.70
NMeFOSAA_1	570.0 / 419.0	3.63	2690.843743	2500.00	107.63
NMeFOSAA_2	570.0 / 512.0	3.63	2779.771451	2500.00	111.19
NEtFOSAA_1	584.0 / 419.0	3.79	2511.026642	2500.00	100.44
NEtFOSAA_2	584.0 / 483.0	3.78	2723.942763	2500.00	108.96

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**	18-0610_18-0611_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

QC Summary 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	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.10	259.132404	250.00	103.65
d3-MeFOSAA	573.0 / 419.0	3.65	217.263097	250.00	86.91
d5-EtFOSAA	589.0 / 419.0	3.81	206.830753	250.00	82.73
13C5-PFHxA	318.0 / 273.0	1.89	259.924320	250.00	103.97
13C4-PFHpA	367.0 / 322.0	2.31	255.044502	250.00	102.02
13C8-PFOA	421.0 / 376.0	2.73	260.077016	250.00	104.03
13C9-PFNA	472.0 / 427.0	3.13	231.388886	250.00	92.56
13C6-PFDA	519.0 / 474.0	3.49	276.436354	250.00	110.57
13C7-PFUnA	570.0 / 525.0	3.81	284.738017	250.00	113.90
13C2-PFTeDA	715.0 / 670.0	4.57	291.091815	250.00	116.44
13C3-PFBS	302.0 / 99.0	1.55	219.366193	232.25	94.45
13C3-PFHxS	402.0 / 99.0	2.34	221.464127	236.50	93.64
13C8-PFOS	507.0 / 99.0	3.13	250.834474	239.25	104.84

QC Summary Report

Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	262.128663	250.00	104.85
d3-MeFOSAA	573.0 / 419.0	3.58	199.224955	250.00	79.69
d5-EtFOSAA	589.0 / 419.0	3.74	220.201313	250.00	88.08
13C5-PFHxA	318.0 / 273.0	1.85	260.200154	250.00	104.08
13C4-PFHpA	367.0 / 322.0	2.27	244.524828	250.00	97.81
13C8-PFOA	421.0 / 376.0	2.68	257.633875	250.00	103.05
13C9-PFNA	472.0 / 427.0	3.07	223.721815	250.00	89.49
13C6-PFDA	519.0 / 474.0	3.42	249.087001	250.00	99.63
13C7-PFUnA	570.0 / 525.0	3.74	250.101659	250.00	100.04
13C2-PFTeDA	715.0 / 670.0	4.48	254.433945	250.00	101.77
13C3-PFBS	302.0 / 99.0	1.53	244.948793	232.25	105.47
13C3-PFHxS	402.0 / 99.0	2.29	227.179379	236.50	96.06
13C8-PFOS	507.0 / 99.0	3.06	230.929302	239.25	96.52

QC Summary Report

Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	258.949048	250.00	103.58
d3-MeFOSAA	573.0 / 419.0	3.57	190.235228	250.00	76.09
d5-EtFOSAA	589.0 / 419.0	3.73	205.846166	250.00	82.34
13C5-PFHxA	318.0 / 273.0	1.84	246.330044	250.00	98.53
13C4-PFHpA	367.0 / 322.0	2.25	238.604730	250.00	95.44
13C8-PFOA	421.0 / 376.0	2.67	262.729662	250.00	105.09
13C9-PFNA	472.0 / 427.0	3.06	222.788172	250.00	89.12
13C6-PFDA	519.0 / 474.0	3.41	247.782373	250.00	99.11
13C7-PFUnA	570.0 / 525.0	3.73	274.679780	250.00	109.87
13C2-PFTeDA	715.0 / 670.0	4.47	275.728673	250.00	110.29
13C3-PFBS	302.0 / 99.0	1.52	272.621120	232.25	117.38
13C3-PFHxS	402.0 / 99.0	2.28	246.039890	236.50	104.03
13C8-PFOS	507.0 / 99.0	3.05	250.305338	239.25	104.62

QC Summary Report

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Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	247.424457	250.00	98.97
d3-MeFOSAA	573.0 / 419.0	3.57	175.241030	250.00	70.10
d5-EtFOSAA	589.0 / 419.0	3.73	205.297536	250.00	82.12
13C5-PFHxA	318.0 / 273.0	1.85	245.856654	250.00	98.34
13C4-PFHpA	367.0 / 322.0	2.26	257.510539	250.00	103.00
13C8-PFOA	421.0 / 376.0	2.67	272.822790	250.00	109.13
13C9-PFNA	472.0 / 427.0	3.06	226.934260	250.00	90.77
13C6-PFDA	519.0 / 474.0	3.41	246.839239	250.00	98.74
13C7-PFUnA	570.0 / 525.0	3.73	273.018101	250.00	109.21
13C2-PFTeDA	715.0 / 670.0	4.47	245.348283	250.00	98.14
13C3-PFBS	302.0 / 99.0	1.52	235.490217	232.25	101.40
13C3-PFHxS	402.0 / 99.0	2.28	242.259385	236.50	102.44
13C8-PFOS	507.0 / 99.0	3.06	253.998921	239.25	106.16

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.14	263.285326	250.00	105.31
d3-MeFOSAA	573.0 / 419.0	3.69	258.788824	250.00	103.52
d5-EtFOSAA	589.0 / 419.0	3.85	195.823285	250.00	78.33
13C5-PFHxA	318.0 / 273.0	1.91	268.898817	250.00	107.56
13C4-PFHpA	367.0 / 322.0	2.34	263.134293	250.00	105.25
13C8-PFOA	421.0 / 376.0	2.76	235.970954	250.00	94.39
13C9-PFNA	472.0 / 427.0	3.16	236.735452	250.00	94.69
13C6-PFDA	519.0 / 474.0	3.52	268.586788	250.00	107.43
13C7-PFUnA	570.0 / 525.0	3.85	266.846987	250.00	106.74
13C2-PFTeDA	715.0 / 670.0	4.63	302.356575	250.00	120.94
13C3-PFBS	302.0 / 99.0	1.57	212.754237	232.25	91.61
13C3-PFHxS	402.0 / 99.0	2.36	245.066962	236.50	103.62
13C8-PFOS	507.0 / 99.0	3.15	277.523975	239.25	116.00

Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	241.825127	250.00	96.73
d3-MeFOSAA	573.0 / 419.0	3.62	225.009154	250.00	90.00
d5-EtFOSAA	589.0 / 419.0	3.78	189.567406	250.00	75.83
13C5-PFHxA	318.0 / 273.0	1.87	253.369161	250.00	101.35
13C4-PFHpA	367.0 / 322.0	2.29	246.425302	250.00	98.57
13C8-PFOA	421.0 / 376.0	2.70	251.426062	250.00	100.57
13C9-PFNA	472.0 / 427.0	3.10	231.726230	250.00	92.69
13C6-PFDA	519.0 / 474.0	3.46	249.283459	250.00	99.71
13C7-PFUnA	570.0 / 525.0	3.78	256.923500	250.00	102.77
13C2-PFTeDA	715.0 / 670.0	4.53	257.878471	250.00	103.15
13C3-PFBS	302.0 / 99.0	1.54	221.238296	232.25	95.26
13C3-PFHxS	402.0 / 99.0	2.31	240.654310	236.50	101.76
13C8-PFOS	507.0 / 99.0	3.10	252.708122	239.25	105.63

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**	18-0610_18-0611_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	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	168978.15	502.963491	322.3	false
PFBS_2	298.9 / 99.0	1.57	48809.67	496.453145	291.2	false
PFHxA_1	313.0 / 269.0	1.91	126916.53	480.896992	53.4	false
PFHxA_2	313.0 / 119.0	1.91	9853.35	485.682826	37.8	false
PFHpA_1	363.0 / 319.0	2.33	122684.07	481.224420	144.6	false
PFHpA_2	363.0 / 169.0	2.32	2810.04	452.441038	71.0	false
PFHxS_1	399.0 / 80.0	2.35	189643.10	518.322649	373.4	false
PFHxS_2	399.0 / 99.0	2.35	53628.52	520.806905	306.2	false
PFOA_1	413.0 / 369.0	2.74	161964.93	450.789129	221.4	false
PFOA_2	413.0 / 169.0	2.74	12663.26	546.555914	171.1	false
PFNA_1	463.0 / 419.0	3.14	153809.90	494.521439	245.9	false
PFNA_2	463.0 / 219.0	3.14	48313.22	507.732683	267.6	false
PFOS_1	499.0 / 80.0	3.14	271288.67	441.273324	138.3	false
PFOS_2	499.0 / 99.0	3.14	50370.97	470.431215	328.2	false
PFDA_1	513.0 / 469.0	3.50	192864.33	451.709750	246.1	false
PFDA_2	513.0 / 219.0	3.50	9748.77	556.902124	140.1	false
PFUnA_1	563.0 / 519.0	3.83	182696.97	457.038917	282.3	false
PFUnA_2	563.0 / 269.0	3.83	11392.08	585.085583	150.5	false
PFDoA_1	613.0 / 569.0	4.11	176881.65	507.066970	383.4	false
PFDoA_2	613.0 / 319.0	4.11	29345.59	531.157147	282.3	false
PFTrDA_1	663.0 / 619.0	4.36	153271.81	452.740787	539.5	false
PFTrDA_2	663.0 / 169.0	4.36	10446.97	467.337333	231.0	false
PFTeDA_1	713.0 / 669.0	4.58	194920.48	504.192869	1043.6	false
PFTeDA_2	713.0 / 169.0	4.58	9520.51	503.867021	572.8	false
NMeFOSAA_1	570.0 / 419.0	3.66	25942.22	429.345311	543.2	false
NMeFOSAA_2	570.0 / 512.0	3.66	13927.12	376.857105	561.8	false
NEtFOSAA_1	584.0 / 419.0	3.82	25050.06	419.389608	464.9	false
NEtFOSAA_2	584.0 / 483.0	3.81	2285.31	616.043667	3911.2	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	333531.66	986.691854	420.7	false
PFBS_2	298.9 / 99.0	1.55	105128.84	1061.248612	395.1	false
PFHxA_1	313.0 / 269.0	1.87	247129.86	966.012728	73.4	false
PFHxA_2	313.0 / 119.0	1.87	16164.36	827.216460	47.3	false
PFHpA_1	363.0 / 319.0	2.28	241027.03	1004.898918	238.2	false
PFHpA_2	363.0 / 169.0	2.27	5178.34	950.708776	128.4	false
PFHxS_1	399.0 / 80.0	2.30	351659.20	1072.365734	419.6	false
PFHxS_2	399.0 / 99.0	2.30	99763.18	1086.321195	486.3	false
PFOA_1	413.0 / 369.0	2.68	362275.17	1035.491532	291.5	false
PFOA_2	413.0 / 169.0	2.68	19513.85	857.036091	194.8	false
PFNA_1	463.0 / 419.0	3.08	305238.37	1047.997138	316.1	false
PFNA_2	463.0 / 219.0	3.08	96399.87	1077.037555	388.1	false
PFOS_1	499.0 / 80.0	3.08	522326.33	982.860895	147.9	false
PFOS_2	499.0 / 99.0	3.08	94272.51	1020.364587	610.2	false
PFDA_1	513.0 / 469.0	3.43	391918.74	1009.965193	409.9	false
PFDA_2	513.0 / 219.0	3.43	15285.06	952.774350	173.5	false
PFUnA_1	563.0 / 519.0	3.76	366319.06	1020.238968	325.8	false
PFUnA_2	563.0 / 269.0	3.75	18651.17	1053.764625	201.7	false
PFDoA_1	613.0 / 569.0	4.03	347061.09	976.057556	393.7	false
PFDoA_2	613.0 / 319.0	4.03	53447.13	954.388605	269.7	false
PFTrDA_1	663.0 / 619.0	4.28	320084.24	1089.692092	759.3	false
PFTrDA_2	663.0 / 169.0	4.27	20210.24	1042.502485	319.5	false
PFTeDA_1	713.0 / 669.0	4.49	351189.36	1046.607861	1163.6	false
PFTeDA_2	713.0 / 169.0	4.49	17003.84	1041.898346	597.5	false
NMeFOSAA_1	570.0 / 419.0	3.59	50746.54	1042.149783	487.4	false
NMeFOSAA_2	570.0 / 512.0	3.59	25589.76	920.903758	899.6	false
NEtFOSAA_1	584.0 / 419.0	3.75	51177.13	925.608913	475.0	false
NEtFOSAA_2	584.0 / 483.0	3.76	3415.05	1014.791195	191.5	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	902422.49	2467.382818	740.0	false
PFBS_2	298.9 / 99.0	1.54	264241.62	2461.939229	648.8	false
PFHxA_1	313.0 / 269.0	1.86	636150.58	2480.474155	139.5	false
PFHxA_2	313.0 / 119.0	1.86	45545.59	2366.151308	90.8	false
PFHpA_1	363.0 / 319.0	2.27	598161.70	2389.668045	287.6	false
PFHpA_2	363.0 / 169.0	2.27	13152.25	2414.467264	166.6	false
PFHxS_1	399.0 / 80.0	2.29	895101.86	2669.892528	485.8	false
PFHxS_2	399.0 / 99.0	2.29	260481.15	2782.451160	693.8	false
PFOA_1	413.0 / 369.0	2.67	903319.62	2360.661425	590.5	false
PFOA_2	413.0 / 169.0	2.67	54940.25	2210.661572	542.2	false
PFNA_1	463.0 / 419.0	3.07	806588.20	2619.471299	657.4	false
PFNA_2	463.0 / 219.0	3.07	253188.78	2668.690625	750.1	false
PFOS_1	499.0 / 80.0	3.07	1352356.67	2482.246979	241.5	false
PFOS_2	499.0 / 99.0	3.07	230862.82	2439.552215	571.4	false
PFDA_1	513.0 / 469.0	3.42	977420.86	2522.317324	543.0	false
PFDA_2	513.0 / 219.0	3.42	39259.11	2456.565460	269.0	false
PFUnA_1	563.0 / 519.0	3.75	981788.94	2462.919479	743.5	false
PFUnA_2	563.0 / 269.0	3.74	50486.72	2554.395191	413.7	false
PFDoA_1	613.0 / 569.0	4.03	953602.48	2721.077969	680.7	false
PFDoA_2	613.0 / 319.0	4.03	143869.20	2626.510884	574.2	false
PFTrDA_1	663.0 / 619.0	4.27	833814.76	2622.783170	1080.5	false
PFTrDA_2	663.0 / 169.0	4.27	55281.19	2644.151384	668.7	false
PFTeDA_1	713.0 / 669.0	4.48	902606.55	2498.323628	1671.5	false
PFTeDA_2	713.0 / 169.0	4.48	43608.57	2489.286956	928.9	false
NMeFOSAA_1	570.0 / 419.0	3.58	134113.77	3071.487600	1077.4	false
NMeFOSAA_2	570.0 / 512.0	3.58	70116.52	2927.700231	766.2	false
NEtFOSAA_1	584.0 / 419.0	3.74	132257.65	2615.489918	715.9	false
NEtFOSAA_2	584.0 / 483.0	3.74	8159.41	2727.090637	495.2	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	353357.68	1050.169568	400.6	false
PFBS_2	298.9 / 99.0	1.54	107622.08	1091.167211	372.8	false
PFHxA_1	313.0 / 269.0	1.86	251344.63	1003.116046	80.0	false
PFHxA_2	313.0 / 119.0	1.86	21409.62	1135.090531	60.5	false
PFHpA_1	363.0 / 319.0	2.27	247538.10	943.074036	189.4	false
PFHpA_2	363.0 / 169.0	2.26	3946.57	635.830740	103.1	false
PFHxS_1	399.0 / 80.0	2.29	370502.08	1039.795327	296.5	false
PFHxS_2	399.0 / 99.0	2.29	106683.46	1069.336866	433.3	false
PFOA_1	413.0 / 369.0	2.68	374734.80	973.668240	331.8	false
PFOA_2	413.0 / 169.0	2.68	22432.83	897.093852	296.5	false
PFNA_1	463.0 / 419.0	3.07	326831.97	1066.438195	393.7	false
PFNA_2	463.0 / 219.0	3.07	101000.30	1071.725175	398.7	false
PFOS_1	499.0 / 80.0	3.07	530969.91	889.229567	182.2	false
PFOS_2	499.0 / 99.0	3.07	99255.03	955.970166	434.6	false
PFDA_1	513.0 / 469.0	3.42	383280.52	946.540151	327.0	false
PFDA_2	513.0 / 219.0	3.42	17016.41	1019.541475	158.0	false
PFUnA_1	563.0 / 519.0	3.74	375254.27	909.427833	352.9	false
PFUnA_2	563.0 / 269.0	3.74	21259.27	1046.392611	224.9	false
PFDoA_1	613.0 / 569.0	4.02	362977.34	1030.064928	432.6	false
PFDoA_2	613.0 / 319.0	4.02	58689.41	1060.210548	329.2	false
PFTrDA_1	663.0 / 619.0	4.27	333460.41	1120.516938	712.7	false
PFTrDA_2	663.0 / 169.0	4.26	22247.91	1135.022250	388.4	false
PFTeDA_1	713.0 / 669.0	4.48	356190.91	1046.899629	1129.3	false
PFTeDA_2	713.0 / 169.0	4.48	17032.93	1028.720436	566.8	false
NMeFOSAA_1	570.0 / 419.0	3.58	55570.65	1290.162301	688.2	false
NMeFOSAA_2	570.0 / 512.0	3.58	27270.59	1119.168222	394.1	false
NEtFOSAA_1	584.0 / 419.0	3.74	51705.49	963.199773	727.6	false
NEtFOSAA_2	584.0 / 483.0	3.73	3935.40	1215.585830	205.5	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	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.59	118662.62	522.412044	285.9	false
PFBS_2	298.9 / 99.0	1.59	35056.45	527.407386	250.6	false
PFHxA_1	313.0 / 269.0	1.92	114227.66	526.286139	36.7	false
PFHxA_2	313.0 / 119.0	1.93	7239.62	425.768924	23.0	false
PFHpA_1	363.0 / 319.0	2.35	110162.89	525.576092	107.7	false
PFHpA_2	363.0 / 169.0	2.35	3165.29	650.577066	72.6	false
PFHxS_1	399.0 / 80.0	2.37	164503.67	580.431109	385.2	false
PFHxS_2	399.0 / 99.0	2.37	45224.22	566.843848	302.0	false
PFOA_1	413.0 / 369.0	2.77	142840.20	551.340780	157.5	false
PFOA_2	413.0 / 169.0	2.77	9394.59	559.312396	135.3	false
PFNA_1	463.0 / 419.0	3.17	138186.60	546.390354	152.0	false
PFNA_2	463.0 / 219.0	3.17	45185.38	584.690652	196.6	false
PFOS_1	499.0 / 80.0	3.17	215896.20	445.794677	139.3	false
PFOS_2	499.0 / 99.0	3.17	36776.94	436.065154	213.9	false
PFDA_1	513.0 / 469.0	3.54	192186.93	518.182139	352.0	false
PFDA_2	513.0 / 219.0	3.54	7974.86	519.865515	119.6	false
PFUnA_1	563.0 / 519.0	3.87	166001.16	493.505176	305.5	false
PFUnA_2	563.0 / 269.0	3.86	11288.85	687.882191	137.1	false
PFDoA_1	613.0 / 569.0	4.15	175376.73	552.712418	341.5	false
PFDoA_2	613.0 / 319.0	4.15	27284.47	541.203184	234.2	false
PFTrDA_1	663.0 / 619.0	4.41	150003.39	475.958829	517.8	false
PFTrDA_2	663.0 / 169.0	4.40	10536.41	507.588784	208.2	false
PFTeDA_1	713.0 / 669.0	4.63	190763.96	530.281016	885.2	false
PFTeDA_2	713.0 / 169.0	4.63	9911.52	567.072165	423.9	false
NMeFOSAA_1	570.0 / 419.0	3.70	21257.06	427.351533	341.2	false
NMeFOSAA_2	570.0 / 512.0	3.69	13644.88	469.356177	548.7	false
NEtFOSAA_1	584.0 / 419.0	3.86	24683.35	646.516551	286.5	true
NEtFOSAA_2	584.0 / 483.0	3.85	1582.14	664.485081	141.1	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	708078.04	2549.465361	703.9	false
PFBS_2	298.9 / 99.0	1.56	207099.66	2540.889186	559.6	false
PFHxA_1	313.0 / 269.0	1.88	504486.88	2360.921742	92.2	false
PFHxA_2	313.0 / 119.0	1.88	38032.93	2373.209379	64.5	false
PFHpA_1	363.0 / 319.0	2.30	487617.12	2329.653906	251.3	false
PFHpA_2	363.0 / 169.0	2.30	10743.50	2357.069111	178.6	false
PFHxS_1	399.0 / 80.0	2.32	753544.67	2372.260114	457.1	false
PFHxS_2	399.0 / 99.0	2.32	210429.22	2370.921317	736.6	false
PFOA_1	413.0 / 369.0	2.71	713167.72	2406.159139	385.4	false
PFOA_2	413.0 / 169.0	2.71	46818.83	2433.312080	307.2	false
PFNA_1	463.0 / 419.0	3.11	672903.76	2595.199327	550.3	false
PFNA_2	463.0 / 219.0	3.11	210348.27	2632.907443	658.5	false
PFOS_1	499.0 / 80.0	3.11	1154913.63	2218.967210	417.6	false
PFOS_2	499.0 / 99.0	3.11	211220.45	2336.176207	539.5	false
PFDA_1	513.0 / 469.0	3.47	846902.65	2410.275241	595.2	false
PFDA_2	513.0 / 219.0	3.47	35497.20	2450.517200	577.4	false
PFUnA_1	563.0 / 519.0	3.80	760775.76	2263.956723	505.3	false
PFUnA_2	563.0 / 269.0	3.79	40043.08	2404.215463	357.0	false
PFDoA_1	613.0 / 569.0	4.07	751634.32	2547.348660	582.1	false
PFDoA_2	613.0 / 319.0	4.07	127550.91	2769.874878	452.4	false
PFTrDA_1	663.0 / 619.0	4.32	726315.59	2712.546224	894.3	false
PFTrDA_2	663.0 / 169.0	4.32	47995.22	2725.618153	599.1	false
PFTeDA_1	713.0 / 669.0	4.54	819981.19	2696.903800	1563.1	false
PFTeDA_2	713.0 / 169.0	4.53	41499.59	2817.621695	906.7	false
NMeFOSAA_1	570.0 / 419.0	3.63	121526.50	2690.843743	1066.6	false
NMeFOSAA_2	570.0 / 512.0	3.63	68811.06	2779.771451	1940.3	false
NEtFOSAA_1	584.0 / 419.0	3.79	112003.45	2511.026642	702.6	false
NEtFOSAA_2	584.0 / 483.0	3.78	7187.68	2723.942763	414.0	false

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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**	18-0610_18-0611_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	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	91153.41	259.132404	1635.1	false
d3-MeFOSAA	573.0 / 419.0	3.65	14430.39	217.263097	229.9	false
d5-EtFOSAA	589.0 / 419.0	3.81	15593.14	206.830753	180.2	false
13C5-PFHxA	318.0 / 273.0	1.89	62579.70	259.924320	518.8	false
13C4-PFHpA	367.0 / 322.0	2.31	69859.85	255.044502	892.1	false
13C8-PFOA	421.0 / 376.0	2.73	86658.98	260.077016	2121.4	false
13C9-PFNA	472.0 / 427.0	3.13	88035.85	231.388886	1040.8	false
13C6-PFDA	519.0 / 474.0	3.49	97968.15	276.436354	928.7	false
13C7-PFUnA	570.0 / 525.0	3.81	93214.36	284.738017	747.8	false
13C2-PFTeDA	715.0 / 670.0	4.57	82671.66	291.091815	2248.9	false
13C3-PFBS	302.0 / 99.0	1.55	26543.28	219.366193	494.4	false
13C3-PFHxS	402.0 / 99.0	2.34	24282.31	221.464127	509.7	false
13C8-PFOS	507.0 / 99.0	3.13	31069.02	250.834474	285.1	false

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Summary Quant Report

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Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	95407.36	262.128663	1070.6	false
d3-MeFOSAA	573.0 / 419.0	3.58	11987.51	199.224955	165.8	false
d5-EtFOSAA	589.0 / 419.0	3.74	15039.43	220.201313	227.8	false
13C5-PFHxA	318.0 / 273.0	1.85	62732.09	260.200154	864.0	false
13C4-PFHpA	367.0 / 322.0	2.27	67070.31	244.524828	867.2	false
13C8-PFOA	421.0 / 376.0	2.68	85962.73	257.633875	1698.7	false
13C9-PFNA	472.0 / 427.0	3.07	85235.60	223.721815	1061.5	false
13C6-PFDA	519.0 / 474.0	3.42	91339.16	249.087001	686.1	false
13C7-PFUnA	570.0 / 525.0	3.74	84716.91	250.101659	684.7	false
13C2-PFTeDA	715.0 / 670.0	4.48	74768.37	254.433945	1376.8	false
13C3-PFBS	302.0 / 99.0	1.53	26850.56	244.948793	461.8	false
13C3-PFHxS	402.0 / 99.0	2.29	22565.69	227.179379	213.7	false
13C8-PFOS	507.0 / 99.0	3.06	25912.69	230.929302	257.3	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	95814.47	258.949048	1766.5	false
d3-MeFOSAA	573.0 / 419.0	3.57	11165.41	190.235228	150.5	false
d5-EtFOSAA	589.0 / 419.0	3.73	13713.64	205.846166	205.2	false
13C5-PFHxA	318.0 / 273.0	1.84	64215.65	246.330044	712.4	false
13C4-PFHpA	367.0 / 322.0	2.25	70766.49	238.604730	782.9	false
13C8-PFOA	421.0 / 376.0	2.67	94788.93	262.729662	1733.7	false
13C9-PFNA	472.0 / 427.0	3.06	91779.59	222.788172	1121.4	false
13C6-PFDA	519.0 / 474.0	3.41	92368.90	247.782373	847.6	false
13C7-PFUnA	570.0 / 525.0	3.73	94586.61	274.679780	1011.9	false
13C2-PFTeDA	715.0 / 670.0	4.47	82370.97	275.728673	1382.3	false
13C3-PFBS	302.0 / 99.0	1.52	29149.82	272.621120	355.5	false
13C3-PFHxS	402.0 / 99.0	2.28	23838.76	246.039890	342.2	false
13C8-PFOS	507.0 / 99.0	3.05	27396.93	250.305338	268.2	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	94695.02	247.424457	1074.3	false
d3-MeFOSAA	573.0 / 419.0	3.57	10921.20	175.241030	168.3	true
d5-EtFOSAA	589.0 / 419.0	3.73	14522.61	205.297536	190.7	false
13C5-PFHxA	318.0 / 273.0	1.85	61519.08	245.856654	670.9	false
13C4-PFHpA	367.0 / 322.0	2.26	73307.43	257.510539	838.3	false
13C8-PFOA	421.0 / 376.0	2.67	94478.62	272.822790	1363.8	false
13C9-PFNA	472.0 / 427.0	3.06	89734.29	226.934260	703.2	false
13C6-PFDA	519.0 / 474.0	3.41	95178.16	246.839239	1476.4	false
13C7-PFUnA	570.0 / 525.0	3.73	97243.86	273.018101	1033.9	false
13C2-PFTeDA	715.0 / 670.0	4.47	75812.89	245.348283	1323.2	false
13C3-PFBS	302.0 / 99.0	1.52	26736.23	235.490217	426.3	false
13C3-PFHxS	402.0 / 99.0	2.28	24923.54	242.259385	297.2	false
13C8-PFOS	507.0 / 99.0	3.06	29519.88	253.998921	265.3	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	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.14	83288.01	263.285326	1222.5	false
d3-MeFOSAA	573.0 / 419.0	3.69	11987.06	258.788824	133.3	false
d5-EtFOSAA	589.0 / 419.0	3.85	10295.75	195.823285	176.1	false
13C5-PFHxA	318.0 / 273.0	1.91	51759.03	268.898817	776.0	false
13C4-PFHpA	367.0 / 322.0	2.34	57623.52	263.134293	812.6	false
13C8-PFOA	421.0 / 376.0	2.76	62860.93	235.970954	1809.2	false
13C9-PFNA	472.0 / 427.0	3.16	72009.70	236.735452	1049.7	false
13C6-PFDA	519.0 / 474.0	3.52	85601.05	268.586788	2042.2	false
13C7-PFUnA	570.0 / 525.0	3.85	78560.52	266.846987	805.6	false
13C2-PFTeDA	715.0 / 670.0	4.63	77223.72	302.356575	2861.1	false
13C3-PFBS	302.0 / 99.0	1.57	17953.05	212.754237	385.9	false
13C3-PFHxS	402.0 / 99.0	2.36	18739.01	245.066962	414.4	false
13C8-PFOS	507.0 / 99.0	3.15	23972.65	277.523975	210.9	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	80613.74	241.825127	913.5	false
d3-MeFOSAA	573.0 / 419.0	3.62	12358.71	225.009154	161.7	false
d5-EtFOSAA	589.0 / 419.0	3.78	11818.52	189.567406	169.6	false
13C5-PFHxA	318.0 / 273.0	1.87	53467.28	253.369161	622.3	false
13C4-PFHpA	367.0 / 322.0	2.29	59162.26	246.425302	859.4	false
13C8-PFOA	421.0 / 376.0	2.70	73429.34	251.426062	1665.6	false
13C9-PFNA	472.0 / 427.0	3.10	77275.17	231.726230	66026.8	false
13C6-PFDA	519.0 / 474.0	3.46	83722.02	249.283459	1032.4	false
13C7-PFUnA	570.0 / 525.0	3.78	79707.22	256.923500	1017.3	false
13C2-PFTeDA	715.0 / 670.0	4.53	69406.19	257.878471	1335.0	false
13C3-PFBS	302.0 / 99.0	1.54	22137.37	221.238296	405.3	false
13C3-PFHxS	402.0 / 99.0	2.31	21820.32	240.654310	295.4	false
13C8-PFOS	507.0 / 99.0	3.10	25884.53	252.708122	276.7	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**	18-0610_18-0611_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

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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	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	0.290	0.292	ü
PFHxA_1	313.0 / 269.0	1.91	PFHxA			
PFHxA_2	313.0 / 119.0	1.91	PFHxA	0.080	0.077	ü
PFHpA_1	363.0 / 319.0	2.33	PFHpA			
PFHpA_2	363.0 / 169.0	2.32	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.35	PFHxS			
PFHxS_2	399.0 / 99.0	2.35	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.74	PFOA			
PFOA_2	413.0 / 169.0	2.74	PFOA	0.080	0.065	ü
PFNA_1	463.0 / 419.0	3.14	PFNA			
PFNA_2	463.0 / 219.0	3.14	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.14	PFOS			
PFOS_2	499.0 / 99.0	3.14	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.50	PFDA			
PFDA_2	513.0 / 219.0	3.50	PFDA	0.050	0.041	ü
PFUnA_1	563.0 / 519.0	3.83	PFUnA			
PFUnA_2	563.0 / 269.0	3.83	PFUnA	0.060	0.049	ü
PFDoA_1	613.0 / 569.0	4.11	PFDoA			
PFDoA_2	613.0 / 319.0	4.11	PFDoA	0.170	0.160	ü
PFTrDA_1	663.0 / 619.0	4.36	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.36	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.58	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.58	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.66	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.66	NMeFOSAA	0.540	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.82	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.81	NEtFOSAA	0.090	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.55	PFBS	0.320	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	2.27	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.050	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.320	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	3.76	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	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.27	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	0.500	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.070	0.062	ü

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Summary Ion Ratio Report

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Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.290	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	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	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.74	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	0.520	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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Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	0.090	0.077	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.025	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.290	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	3.07	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	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	3.74	PFUnA	0.060	0.049	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	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	4.48	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.490	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.080	0.062	ü

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Summary Ion Ratio Report

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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	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.59	PFBS			
PFBS_2	298.9 / 99.0	1.59	PFBS	0.300	0.292	ü
PFHxA_1	313.0 / 269.0	1.92	PFHxA			
PFHxA_2	313.0 / 119.0	1.93	PFHxA	0.060	0.077	ü
PFHpA_1	363.0 / 319.0	2.35	PFHpA			
PFHpA_2	363.0 / 169.0	2.35	PFHpA	0.030	0.025	ü
PFHxS_1	399.0 / 80.0	2.37	PFHxS			
PFHxS_2	399.0 / 99.0	2.37	PFHxS	0.270	0.282	ü
PFOA_1	413.0 / 369.0	2.77	PFOA			
PFOA_2	413.0 / 169.0	2.77	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.17	PFNA			
PFNA_2	463.0 / 219.0	3.17	PFNA	0.330	0.306	ü
PFOS_1	499.0 / 80.0	3.17	PFOS			
PFOS_2	499.0 / 99.0	3.17	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.54	PFDA			
PFDA_2	513.0 / 219.0	3.54	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.87	PFUnA			
PFUnA_2	563.0 / 269.0	3.86	PFUnA	0.070	0.049	ü
PFDoA_1	613.0 / 569.0	4.15	PFDoA			
PFDoA_2	613.0 / 319.0	4.15	PFDoA	0.160	0.160	ü
PFTrDA_1	663.0 / 619.0	4.41	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.40	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.63	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.63	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.70	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.69	NMeFOSAA	0.640	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.86	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.85	NEtFOSAA	0.060	0.062	ü

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Summary Ion Ratio Report

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Printed: 24/10/2018 1:25:56 PM

Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.88	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	0.070	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	0.180	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	3.79	PFUnA	0.050	0.049	ü
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	4.07	PFDoA	0.170	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	4.53	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.570	0.551	ü
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.78	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**	18-0610_18-0611_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	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	26543.28	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	26543.28	232.25
PFHxA_1	313.0 / 269.0	1.91	13C5-PFHxA	318.0 / 273.0	62579.70	250.00
PFHxA_2	313.0 / 119.0	1.91	13C5-PFHxA	318.0 / 273.0	62579.70	250.00
PFHpA_1	363.0 / 319.0	2.33	13C4-PFHpA	367.0 / 322.0	69859.85	250.00
PFHpA_2	363.0 / 169.0	2.32	13C4-PFHpA	367.0 / 322.0	69859.85	250.00
PFHxS_1	399.0 / 80.0	2.35	13C3-PFHxS	402.0 / 99.0	24467.83	236.50
PFHxS_2	399.0 / 99.0	2.35	13C3-PFHxS	402.0 / 99.0	24467.83	236.50
PFOA_1	413.0 / 369.0	2.74	13C8-PFOA	421.0 / 376.0	86658.98	250.00
PFOA_2	413.0 / 169.0	2.74	13C8-PFOA	421.0 / 376.0	86658.98	250.00
PFNA_1	463.0 / 419.0	3.14	13C9-PFNA	472.0 / 427.0	88035.85	250.00
PFNA_2	463.0 / 219.0	3.14	13C9-PFNA	472.0 / 427.0	88035.85	250.00
PFOS_1	499.0 / 80.0	3.14	13C8-PFOS	507.0 / 99.0	30825.96	239.25
PFOS_2	499.0 / 99.0	3.14	13C8-PFOS	507.0 / 99.0	30825.96	239.25
PFDA_1	513.0 / 469.0	3.50	13C6-PFDA	519.0 / 474.0	97968.15	250.00
PFDA_2	513.0 / 219.0	3.50	13C6-PFDA	519.0 / 474.0	97968.15	250.00
PFUnA_1	563.0 / 519.0	3.83	13C7-PFUnA	570.0 / 525.0	93214.36	250.00
PFUnA_2	563.0 / 269.0	3.83	13C7-PFUnA	570.0 / 525.0	93214.36	250.00
PFDoA_1	613.0 / 569.0	4.11	13C2-PFDoA	615.0 / 570.0	91153.41	250.00
PFDoA_2	613.0 / 319.0	4.11	13C2-PFDoA	615.0 / 570.0	91153.41	250.00
PFTrDA_1	663.0 / 619.0	4.36	13C2-PFTeDA	715.0 / 670.0	82671.66	250.00
PFTrDA_2	663.0 / 169.0	4.36	13C2-PFTeDA	715.0 / 670.0	82671.66	250.00
PFTeDA_1	713.0 / 669.0	4.58	13C2-PFTeDA	715.0 / 670.0	82671.66	250.00
PFTeDA_2	713.0 / 169.0	4.58	13C2-PFTeDA	715.0 / 670.0	82671.66	250.00
NMeFOSAA_1	570.0 / 419.0	3.66	d3-MeFOSAA	573.0 / 419.0	14257.30	250.00
NMeFOSAA_2	570.0 / 512.0	3.66	d3-MeFOSAA	573.0 / 419.0	14257.30	250.00
NEtFOSAA_1	584.0 / 419.0	3.82	d5-EtFOSAA	589.0 / 419.0	16047.60	250.00
NEtFOSAA_2	584.0 / 483.0	3.81	d5-EtFOSAA	589.0 / 419.0	16047.60	250.00

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	26850.56	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	26850.56	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	62732.09	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	62732.09	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	67070.31	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	67070.31	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	22361.36	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	22361.36	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	85962.73	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	85962.73	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	85235.60	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	85235.60	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	26586.99	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	26586.99	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	91339.16	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	91339.16	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	84716.91	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	84716.91	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	95407.36	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	95407.36	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	74768.37	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	74768.37	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	74768.37	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	74768.37	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	12344.77	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	12344.77	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	15110.83	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	15110.83	250.00

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	29149.82	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	29149.82	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	64215.65	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	64215.65	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	70766.49	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	70766.49	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	23115.68	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	23115.68	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	94788.93	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	94788.93	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	91779.59	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	91779.59	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	27226.22	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	27226.22	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	92368.90	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	92368.90	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	94586.61	250.00
PFUnA_2	563.0 / 269.0	3.74	13C7-PFUnA	570.0 / 525.0	94586.61	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	95814.47	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	95814.47	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	82370.97	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	82370.97	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	82370.97	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	82370.97	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	11464.48	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	11464.48	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	13948.66	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	13948.66	250.00

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	26736.23	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	26736.23	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	61519.08	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	61519.08	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	73307.43	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	73307.43	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	24283.52	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	24283.52	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	94478.62	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	94478.62	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	89734.29	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	89734.29	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	29878.50	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	29878.50	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	95178.16	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	95178.16	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	97243.86	250.00
PFUnA_2	563.0 / 269.0	3.74	13C7-PFUnA	570.0 / 525.0	97243.86	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	94695.02	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	94695.02	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	75812.89	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	75812.89	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	75812.89	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	75812.89	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	11030.17	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	11030.17	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	14679.19	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	14679.19	250.00

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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	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.59	13C3-PFBS	302.0 / 99.0	17953.05	232.25
PFBS_2	298.9 / 99.0	1.59	13C3-PFBS	302.0 / 99.0	17953.05	232.25
PFHxA_1	313.0 / 269.0	1.92	13C5-PFHxA	318.0 / 273.0	51759.03	250.00
PFHxA_2	313.0 / 119.0	1.93	13C5-PFHxA	318.0 / 273.0	51759.03	250.00
PFHpA_1	363.0 / 319.0	2.35	13C4-PFHpA	367.0 / 322.0	57623.52	250.00
PFHpA_2	363.0 / 169.0	2.35	13C4-PFHpA	367.0 / 322.0	57623.52	250.00
PFHxS_1	399.0 / 80.0	2.37	13C3-PFHxS	402.0 / 99.0	19029.28	236.50
PFHxS_2	399.0 / 99.0	2.37	13C3-PFHxS	402.0 / 99.0	19029.28	236.50
PFOA_1	413.0 / 369.0	2.77	13C8-PFOA	421.0 / 376.0	62860.93	250.00
PFOA_2	413.0 / 169.0	2.77	13C8-PFOA	421.0 / 376.0	62860.93	250.00
PFNA_1	463.0 / 419.0	3.17	13C9-PFNA	472.0 / 427.0	72009.70	250.00
PFNA_2	463.0 / 219.0	3.17	13C9-PFNA	472.0 / 427.0	72009.70	250.00
PFOS_1	499.0 / 80.0	3.17	13C8-PFOS	507.0 / 99.0	24282.02	239.25
PFOS_2	499.0 / 99.0	3.17	13C8-PFOS	507.0 / 99.0	24282.02	239.25
PFDA_1	513.0 / 469.0	3.54	13C6-PFDA	519.0 / 474.0	85601.05	250.00
PFDA_2	513.0 / 219.0	3.54	13C6-PFDA	519.0 / 474.0	85601.05	250.00
PFUnA_1	563.0 / 519.0	3.87	13C7-PFUnA	570.0 / 525.0	78560.52	250.00
PFUnA_2	563.0 / 269.0	3.86	13C7-PFUnA	570.0 / 525.0	78560.52	250.00
PFDoA_1	613.0 / 569.0	4.15	13C2-PFDoA	615.0 / 570.0	83288.01	250.00
PFDoA_2	613.0 / 319.0	4.15	13C2-PFDoA	615.0 / 570.0	83288.01	250.00
PFTrDA_1	663.0 / 619.0	4.41	13C2-PFTeDA	715.0 / 670.0	77223.72	250.00
PFTrDA_2	663.0 / 169.0	4.40	13C2-PFTeDA	715.0 / 670.0	77223.72	250.00
PFTeDA_1	713.0 / 669.0	4.63	13C2-PFTeDA	715.0 / 670.0	77223.72	250.00
PFTeDA_2	713.0 / 169.0	4.63	13C2-PFTeDA	715.0 / 670.0	77223.72	250.00
NMeFOSAA_1	570.0 / 419.0	3.70	d3-MeFOSAA	573.0 / 419.0	11730.49	250.00
NMeFOSAA_2	570.0 / 512.0	3.69	d3-MeFOSAA	573.0 / 419.0	11730.49	250.00
NEtFOSAA_1	584.0 / 419.0	3.86	d5-EtFOSAA	589.0 / 419.0	10370.40	250.00
NEtFOSAA_2	584.0 / 483.0	3.85	d5-EtFOSAA	589.0 / 419.0	10370.40	250.00

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	22137.37	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	22137.37	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	53467.28	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	53467.28	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	59162.26	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	59162.26	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	21881.03	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	21881.03	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	73429.34	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	73429.34	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	77275.17	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	77275.17	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	26012.19	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	26012.19	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	83722.02	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	83722.02	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	79707.22	250.00
PFUnA_2	563.0 / 269.0	3.79	13C7-PFUnA	570.0 / 525.0	79707.22	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	80613.74	250.00
PFDoA_2	613.0 / 319.0	4.07	13C2-PFDoA	615.0 / 570.0	80613.74	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	69406.19	250.00
PFTrDA_2	663.0 / 169.0	4.32	13C2-PFTeDA	715.0 / 670.0	69406.19	250.00
PFTeDA_1	713.0 / 669.0	4.54	13C2-PFTeDA	715.0 / 670.0	69406.19	250.00
PFTeDA_2	713.0 / 169.0	4.53	13C2-PFTeDA	715.0 / 670.0	69406.19	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	11827.37	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	11827.37	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	12301.35	250.00
NEtFOSAA_2	584.0 / 483.0	3.78	d5-EtFOSAA	589.0 / 419.0	12301.35	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**	18-0610_18-0611_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	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	90191.16	250.00
d3-MeFOSAA	573.0 / 419.0	3.65	13C4-PFOS	503.0 / 99.0	31112.11	239.25
d5-EtFOSAA	589.0 / 419.0	3.81	13C4-PFOS	503.0 / 99.0	31112.11	239.25
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	81344.96	250.00
13C4-PFHpA	367.0 / 322.0	2.31	13C2-PFOA	415.0 / 370.0	81344.96	250.00
13C8-PFOA	421.0 / 376.0	2.73	13C2-PFOA	415.0 / 370.0	81344.96	250.00
13C9-PFNA	472.0 / 427.0	3.13	13C2-PFOA	415.0 / 370.0	81344.96	250.00
13C6-PFDA	519.0 / 474.0	3.49	13C2-PFDA	515.0 / 470.0	90191.16	250.00
13C7-PFUnA	570.0 / 525.0	3.81	13C2-PFDA	515.0 / 470.0	90191.16	250.00
13C2-PFTeDA	715.0 / 670.0	4.57	13C2-PFDA	515.0 / 470.0	90191.16	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	31112.11	239.25
13C3-PFHxS	402.0 / 99.0	2.34	13C4-PFOS	503.0 / 99.0	31112.11	239.25
13C8-PFOS	507.0 / 99.0	3.13	13C4-PFOS	503.0 / 99.0	31112.11	239.25

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	93321.16	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	28185.29	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	28185.29	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	81456.60	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	81456.60	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	81456.60	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	81456.60	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	93321.16	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	93321.16	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	93321.16	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	28185.29	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	28185.29	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	28185.29	239.25

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	94870.15	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	27492.93	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	27492.93	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	88078.02	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	88078.02	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	88078.02	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	88078.02	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	94870.15	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	94870.15	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	94870.15	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27492.93	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	27492.93	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	27492.93	239.25

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	98128.99	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	29192.54	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	29192.54	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	84541.88	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	84541.88	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	84541.88	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	84541.88	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	98128.99	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	98128.99	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	98128.99	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	29192.54	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	29192.54	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	29192.54	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	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	4.14	13C2-PFDA	515.0 / 470.0	81108.92	250.00
d3-MeFOSAA	573.0 / 419.0	3.69	13C4-PFOS	503.0 / 99.0	21697.25	239.25
d5-EtFOSAA	589.0 / 419.0	3.85	13C4-PFOS	503.0 / 99.0	21697.25	239.25
13C5-PFHxA	318.0 / 273.0	1.91	13C2-PFOA	415.0 / 370.0	65034.12	250.00
13C4-PFHpA	367.0 / 322.0	2.34	13C2-PFOA	415.0 / 370.0	65034.12	250.00
13C8-PFOA	421.0 / 376.0	2.76	13C2-PFOA	415.0 / 370.0	65034.12	250.00
13C9-PFNA	472.0 / 427.0	3.16	13C2-PFOA	415.0 / 370.0	65034.12	250.00
13C6-PFDA	519.0 / 474.0	3.52	13C2-PFDA	515.0 / 470.0	81108.92	250.00
13C7-PFUnA	570.0 / 525.0	3.85	13C2-PFDA	515.0 / 470.0	81108.92	250.00
13C2-PFTeDA	715.0 / 670.0	4.63	13C2-PFDA	515.0 / 470.0	81108.92	250.00
13C3-PFBS	302.0 / 99.0	1.57	13C4-PFOS	503.0 / 99.0	21697.25	239.25
13C3-PFHxS	402.0 / 99.0	2.36	13C4-PFOS	503.0 / 99.0	21697.25	239.25
13C8-PFOS	507.0 / 99.0	3.15	13C4-PFOS	503.0 / 99.0	21697.25	239.25

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	85471.32	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	25728.25	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	25728.25	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	71298.17	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	71298.17	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	71298.17	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	71298.17	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	85471.32	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	85471.32	250.00
13C2-PFTeDA	715.0 / 670.0	4.53	13C2-PFDA	515.0 / 470.0	85471.32	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	25728.25	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	25728.25	239.25
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	25728.25	239.25

Raw Analytical Data

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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**	18-0610_18-0611_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

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:27:43	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	true
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	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	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	CR988PB-FS(3)	**Injection Vial**	31
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:15:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	4246.46	< 0	16.1	false
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	3.08	2007.80	< 0	15.9	false
PFNA_2	463.0 / 219.0	3.08	476.35	< 0	10.1	false
PFOS_1	499.0 / 80.0	3.08	5065.01	11.643461	15.7	false
PFOS_2	499.0 / 99.0	3.09	1174.14	13.545840	18.1	false
PFDA_1	513.0 / 469.0	3.45	868.27	< 0	11.8	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	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	CR989LCS-FS(3)	**Injection Vial**	32
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:26:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	603468.48	2030.087698	555.4	false
PFBS_2	298.9 / 99.0	1.54	176000.26	2017.852653	442.8	false
PFHxA_1	313.0 / 269.0	1.86	443729.66	2205.056058	113.6	false
PFHxA_2	313.0 / 119.0	1.86	33354.24	2208.778190	85.2	false
PFHpA_1	363.0 / 319.0	2.27	408784.02	2186.264589	250.7	false
PFHpA_2	363.0 / 169.0	2.27	10221.33	2517.548085	161.2	false
PFHxS_1	399.0 / 80.0	2.29	633909.45	2181.052902	572.4	false
PFHxS_2	399.0 / 99.0	2.29	175737.42	2163.420634	666.3	false
PFOA_1	413.0 / 369.0	2.68	619093.27	2182.466217	445.4	false
PFOA_2	413.0 / 169.0	2.68	36535.72	1982.673249	305.9	false
PFNA_1	463.0 / 419.0	3.07	577734.88	2330.716559	430.5	false
PFNA_2	463.0 / 219.0	3.07	176775.54	2314.337587	504.8	false
PFOS_1	499.0 / 80.0	3.07	930312.93	2106.502034	254.7	false
PFOS_2	499.0 / 99.0	3.07	164354.66	2142.253729	640.3	false
PFDA_1	513.0 / 469.0	3.43	677412.71	2212.184264	617.5	false
PFDA_2	513.0 / 219.0	3.42	31373.96	2487.566456	266.1	false
PFUnA_1	563.0 / 519.0	3.75	671155.83	2031.208241	475.9	false
PFUnA_2	563.0 / 269.0	3.75	35868.83	2191.310573	283.6	false
PFDoA_1	613.0 / 569.0	4.03	652549.62	2273.250333	639.7	false
PFDoA_2	613.0 / 319.0	4.03	111154.60	2480.358819	373.3	false
PFTrDA_1	663.0 / 619.0	4.27	576431.91	2187.586684	756.2	false
PFTrDA_2	663.0 / 169.0	4.27	38357.16	2213.060845	460.3	false
PFTeDA_1	713.0 / 669.0	4.48	671431.08	2243.626102	1686.7	false
PFTeDA_2	713.0 / 169.0	4.48	32299.50	2225.082394	937.0	false
NMeFOSAA_1	570.0 / 419.0	3.58	95283.06	2743.695040	595.7	false
NMeFOSAA_2	570.0 / 512.0	3.58	53889.14	2831.909329	520.0	false
NEtFOSAA_1	584.0 / 419.0	3.74	93520.55	2050.709642	718.8	false
NEtFOSAA_2	584.0 / 483.0	3.74	5884.36	2171.203990	392.6	false

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Summary Quant Report

Sample Name	J8658-FS(3)	**Injection Vial**	33
Sample ID	VC-CS12-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:37:17	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	5206.17	12.775500	32.4	true
PFBS_2	298.9 / 99.0	1.55	1720.62	16.924326	22.4	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	6249.59	12.427293	15.5	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.30	23448.54	60.964192	103.8	false
PFHxS_2	399.0 / 99.0	2.30	6763.92	58.559407	72.1	false
PFOA_1	413.0 / 369.0	2.69	9441.04	16.562216	30.3	false
PFOA_2	413.0 / 169.0	2.69	768.04	25.315489	17.6	false
PFNA_1	463.0 / 419.0	3.07	6653.43	< 0	38.1	false
PFNA_2	463.0 / 219.0	3.08	1854.63	< 0	35.2	false
PFOS_1	499.0 / 80.0	3.08	204577.86	442.229349	163.6	false
PFOS_2	499.0 / 99.0	3.08	39802.55	493.999389	238.7	false
PFDA_1	513.0 / 469.0	3.43	5428.37	< 0	38.6	false
PFDA_2	513.0 / 219.0	3.44	386.20	5.347282	16.6	false
PFUnA_1	563.0 / 519.0	3.75	4221.73	3.786032	32.7	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.03	3275.87	< 0	47.9	false
PFDoA_2	613.0 / 319.0	4.01	642.47	< 0	21.3	false
PFTrDA_1	663.0 / 619.0	4.27	3169.40	< 0	76.6	false
PFTrDA_2	663.0 / 169.0	4.23	382.11	< 0	17.0	false
PFTeDA_1	713.0 / 669.0	4.48	2914.24	< 0	61.0	false
PFTeDA_2	713.0 / 169.0	4.48	191.37	< 0	17.0	false
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.75	687.81	4.008433	25.9	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	J8659-FS(3)	**Injection Vial**	34
Sample ID	VC-CS12-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:48:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	8985.84	17.598081	43.3	false
PFBS_2	298.9 / 99.0	1.54	2890.58	21.656207	37.6	true
PFHxA_1	313.0 / 269.0	1.86	30644.16	89.279897	19.4	false
PFHxA_2	313.0 / 119.0	1.87	2789.34	99.582756	17.2	false
PFHpA_1	363.0 / 319.0	2.27	13295.16	28.512783	35.0	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	161719.49	447.506465	207.7	false
PFHxS_2	399.0 / 99.0	2.29	46010.30	451.863567	211.6	false
PFOA_1	413.0 / 369.0	2.68	125671.63	307.823457	155.1	false
PFOA_2	413.0 / 169.0	2.67	11029.43	422.072434	126.1	false
PFNA_1	463.0 / 419.0	3.08	8030.27	< 0	36.3	false
PFNA_2	463.0 / 219.0	3.08	2504.46	< 0	44.7	false
PFOS_1	499.0 / 80.0	3.04	156382.44	269.043929	79.7	false
PFOS_2	499.0 / 99.0	3.07	25665.98	253.050475	118.6	false
PFDA_1	513.0 / 469.0	3.43	1138.54	< 0	14.9	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	4.03	1588.70	< 0	22.9	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.26	762.69	< 0	25.6	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.48	776.67	< 0	22.5	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

Sample Name	J8660-FS(3)	**Injection Vial**	35
Sample ID	VC-CS12-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:59:00	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	3573.92	6.804547	28.5	true
PFBS_2	298.9 / 99.0	1.51	1898.19	18.656678	26.9	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	2.27	3302.73	< 0	10.9	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	12949.56	27.272695	43.7	false
PFHxS_2	399.0 / 99.0	2.29	4348.33	31.744325	51.0	false
PFOA_1	413.0 / 369.0	2.68	10995.13	21.853500	33.2	false
PFOA_2	413.0 / 169.0	2.59	805.94	27.354986	17.0	false
PFNA_1	463.0 / 419.0	3.08	3646.80	< 0	22.6	false
PFNA_2	463.0 / 219.0	3.07	722.19	< 0	13.3	false
PFOS_1	499.0 / 80.0	3.08	10963.02	26.077278	19.0	false
PFOS_2	499.0 / 99.0	3.08	1015.53	13.347316	13.2	false
PFDA_1	513.0 / 469.0	3.42	1567.11	< 0	16.4	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.76	1625.46	< 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	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	4.27	1092.68	< 0	35.7	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	381.26	< 0	11.5	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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Sample Name	J8661-FS(3)	**Injection Vial**	36
Sample ID	VC-CS12-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:09:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	28544.98	88.891735	86.2	false
PFBS_2	298.9 / 99.0	1.54	10057.42	109.607179	89.9	false
PFHxA_1	313.0 / 269.0	1.86	74714.41	318.699578	34.2	false
PFHxA_2	313.0 / 119.0	1.86	4886.74	258.709244	25.2	false
PFHpA_1	363.0 / 319.0	2.26	23921.95	91.152238	48.8	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	120488.92	408.989806	148.8	false
PFHxS_2	399.0 / 99.0	2.29	37734.27	456.683028	212.7	false
PFOA_1	413.0 / 369.0	2.67	18052.35	39.477864	47.3	false
PFOA_2	413.0 / 169.0	2.56	1687.63	64.230794	34.6	true
PFNA_1	463.0 / 419.0	3.08	2165.80	< 0	15.5	false
PFNA_2	463.0 / 219.0	3.08	1037.41	< 0	18.5	true
PFOS_1	499.0 / 80.0	3.08	165356.63	391.231795	111.2	false
PFOS_2	499.0 / 99.0	3.07	33589.02	456.073382	241.8	false
PFDA_1	513.0 / 469.0	3.43	2410.36	< 0	21.4	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.74	1362.56	< 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	1439.03	< 0	27.0	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.27	1102.98	< 0	38.4	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.48	557.37	< 0	15.7	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8662-FS(3)	**Injection Vial**	38
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:31:37	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	13535.15	34.156927	57.5	false
PFBS_2	298.9 / 99.0	1.53	3968.04	35.936727	57.6	false
PFHxA_1	313.0 / 269.0	1.85	44223.72	178.278720	24.1	false
PFHxA_2	313.0 / 119.0	1.86	3338.88	164.140910	24.1	false
PFHpA_1	363.0 / 319.0	2.27	41620.54	170.815300	66.7	false
PFHpA_2	363.0 / 169.0	2.27	1367.28	205.709477	27.6	false
PFHxS_1	399.0 / 80.0	2.29	411365.07	1311.363604	281.8	false
PFHxS_2	399.0 / 99.0	2.29	113373.13	1290.874325	453.7	false
PFOA_1	413.0 / 369.0	2.67	238039.71	707.351983	269.5	false
PFOA_2	413.0 / 169.0	2.64	21140.85	973.678613	134.7	true
PFNA_1	463.0 / 419.0	3.08	6508.60	< 0	34.3	false
PFNA_2	463.0 / 219.0	3.07	2345.13	< 0	25.8	false
PFOS_1	499.0 / 80.0	3.07	171425.62	331.994571	89.1	false
PFOS_2	499.0 / 99.0	3.07	29969.27	332.917525	187.7	false
PFDA_1	513.0 / 469.0	3.40	964.36	< 0	11.3	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.75	1536.06	< 0	13.2	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	4.26	649.05	< 0	23.0	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8663-FS(3)	**Injection Vial**	39
Sample ID	VC-CS12-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:42:29	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	5996.92	14.125061	28.6	true
PFBS_2	298.9 / 99.0	1.53	2559.99	24.906299	33.0	true
PFHxA_1	313.0 / 269.0	1.86	22104.18	75.790680	13.2	false
PFHxA_2	313.0 / 119.0	1.86	1653.57	59.227201	8.6	false
PFHpA_1	363.0 / 319.0	2.27	9201.24	22.695687	26.4	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	42816.72	116.974997	126.9	false
PFHxS_2	399.0 / 99.0	2.29	13019.60	124.190114	90.3	false
PFOA_1	413.0 / 369.0	2.67	60521.54	178.636874	108.7	false
PFOA_2	413.0 / 169.0	2.61	5453.11	254.460727	54.7	true
PFNA_1	463.0 / 419.0	3.06	2176.87	< 0	15.7	false
PFNA_2	463.0 / 219.0	3.07	428.87	< 0	9.2	false
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	3.43	1434.40	< 0	17.4	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	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	4.27	399.95	< 0	22.8	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	J8664-FS(3)	**Injection Vial**	40
Sample ID	VC-CS12-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:53:22	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1244.08	< 0	14.2	true
PFBS_2	298.9 / 99.0	1.52	1012.78	7.784394	17.4	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	6518.39	8.413385	19.1	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	22932.07	52.813486	78.3	false
PFHxS_2	399.0 / 99.0	2.29	7884.75	64.608928	75.1	false
PFOA_1	413.0 / 369.0	2.67	17323.93	37.700850	42.2	false
PFOA_2	413.0 / 169.0	2.67	1617.94	61.597949	28.7	false
PFNA_1	463.0 / 419.0	3.07	7324.40	< 0	37.0	false
PFNA_2	463.0 / 219.0	3.07	2429.60	1.327877	40.0	false
PFOS_1	499.0 / 80.0	3.08	298926.15	590.577628	180.5	false
PFOS_2	499.0 / 99.0	3.07	59486.87	675.323945	277.1	false
PFDA_1	513.0 / 469.0	3.43	2678.02	< 0	25.6	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.74	2765.87	< 0	21.5	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	1811.96	< 0	26.3	false
PFDoA_2	613.0 / 319.0	4.04	572.02	< 0	17.5	false
PFTrDA_1	663.0 / 619.0	4.25	764.52	< 0	27.6	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	564.87	< 0	16.7	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8666-FS(3)	**Injection Vial**	43
Sample ID	VC-CS12-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:36:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.68	4121.46	< 0	13.3	false
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	3.08	2731.43	< 0	21.9	false
PFNA_2	463.0 / 219.0	3.07	1356.32	< 0	20.9	false
PFOS_1	499.0 / 80.0	3.08	10930.72	23.881460	23.5	false
PFOS_2	499.0 / 99.0	3.08	1198.90	14.345293	23.9	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.01	880.79	< 0	16.7	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.25	794.48	< 0	26.4	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	J8671-FS(3)	**Injection Vial**	44
Sample ID	VC-CS10-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:47:42	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.28	2481.13	< 0	10.9	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	5637.60	< 0	38.4	false
PFHxS_2	399.0 / 99.0	2.30	2321.78	< 0	32.0	false
PFOA_1	413.0 / 369.0	2.68	23297.06	52.378074	52.2	false
PFOA_2	413.0 / 169.0	2.67	1601.86	57.085644	40.2	false
PFNA_1	463.0 / 419.0	3.08	5786.86	< 0	29.4	false
PFNA_2	463.0 / 219.0	3.07	2438.48	< 0	37.4	false
PFOS_1	499.0 / 80.0	3.07	105367.30	210.682595	74.6	false
PFOS_2	499.0 / 99.0	3.07	20794.18	237.856477	153.8	false
PFDA_1	513.0 / 469.0	3.42	2686.31	< 0	23.4	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.71	2584.19	< 0	18.2	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	1732.98	< 0	24.8	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.21	693.06	< 0	27.3	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

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Sample Name	J8672-FS(3)	**Injection Vial**	45
Sample ID	VC-CS10-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:58:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.26	4253.04	< 0	14.0	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	7223.26	1.938599	36.1	false
PFHxS_2	399.0 / 99.0	2.29	2319.50	0.071501	39.8	false
PFOA_1	413.0 / 369.0	2.67	19808.00	46.141706	46.1	false
PFOA_2	413.0 / 169.0	2.66	2205.85	90.698063	38.4	true
PFNA_1	463.0 / 419.0	3.07	2313.18	< 0	16.1	false
PFNA_2	463.0 / 219.0	3.07	736.77	< 0	13.5	false
PFOS_1	499.0 / 80.0	3.06	16737.44	38.578979	17.0	false
PFOS_2	499.0 / 99.0	3.07	1754.43	22.601107	22.5	true
PFDA_1	513.0 / 469.0	3.43	1478.70	< 0	14.5	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.74	1532.42	< 0	11.0	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	4.25	646.92	< 0	15.0	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8673-FS(3)	**Injection Vial**	46
Sample ID	VC-CS10-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:09:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.68	4247.29	< 0	12.4	false
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	3.07	2229.57	< 0	13.3	false
PFNA_2	463.0 / 219.0	3.08	1235.48	< 0	18.3	false
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	3.76	1574.25	< 0	15.5	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.01	726.06	< 0	15.6	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.26	460.72	< 0	13.5	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8674-FS(3)	**Injection Vial**	47
Sample ID	VC-CS10-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:20:16	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	5799.52	< 0	23.5	false
PFHxS_2	399.0 / 99.0	2.29	1738.04	< 0	18.9	false
PFOA_1	413.0 / 369.0	2.68	18691.16	45.352769	52.3	false
PFOA_2	413.0 / 169.0	2.66	804.83	25.701699	22.2	true
PFNA_1	463.0 / 419.0	3.07	6894.09	< 0	33.8	false
PFNA_2	463.0 / 219.0	3.06	2264.10	1.207349	30.2	false
PFOS_1	499.0 / 80.0	3.07	117219.06	277.040465	113.9	false
PFOS_2	499.0 / 99.0	3.07	23091.30	312.726203	147.8	false
PFDA_1	513.0 / 469.0	3.42	4982.22	< 0	41.7	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.72	2036.25	< 0	19.2	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	1522.72	< 0	26.1	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.23	827.17	< 0	17.9	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	J8675-FS(3)	**Injection Vial**	48
Sample ID	VC-CS10-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:31:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.67	12738.64	23.551975	34.2	false
PFOA_2	413.0 / 169.0	2.68	743.20	20.356172	20.2	false
PFNA_1	463.0 / 419.0	3.07	3178.84	< 0	21.6	false
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.07	18100.28	37.126404	19.9	false
PFOS_2	499.0 / 99.0	3.08	3483.35	39.560664	32.6	false
PFDA_1	513.0 / 469.0	3.42	968.62	< 0	10.3	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.75	1321.11	< 0	12.2	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.01	1223.33	< 0	18.4	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.26	689.89	< 0	24.3	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

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Sample Name	J8676-FS(3)	**Injection Vial**	49
Sample ID	VC-CS10-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:41:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.67	7546.27	7.016155	25.2	false
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	3.07	2594.82	< 0	17.3	false
PFNA_2	463.0 / 219.0	3.08	925.32	< 0	18.6	false
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	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T19:43:39	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.58	2722.79	3.712794	18.3	true
PFBS_2	298.9 / 99.0	1.58	819.86	5.797016	15.3	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	2.34	5963.93	6.614413	14.5	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.36	6822.95	2.081422	33.1	false
PFHxS_2	399.0 / 99.0	2.37	2449.37	3.250105	23.2	true
PFOA_1	413.0 / 369.0	2.75	8135.53	11.076595	22.3	false
PFOA_2	413.0 / 169.0	2.75	715.87	21.127193	15.2	false
PFNA_1	463.0 / 419.0	3.16	6357.44	< 0	19.8	false
PFNA_2	463.0 / 219.0	3.15	1267.46	< 0	16.6	false
PFOS_1	499.0 / 80.0	3.12	9995.09	21.768884	22.4	true
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	true
PFDA_1	513.0 / 469.0	3.52	5962.03	< 0	37.3	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.85	4956.52	3.827762	35.1	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.13	4432.61	< 0	57.4	false
PFDoA_2	613.0 / 319.0	4.13	1268.69	< 0	31.6	false
PFTrDA_1	663.0 / 619.0	4.39	3450.42	< 0	90.3	false
PFTrDA_2	663.0 / 169.0	4.39	356.49	< 0	17.2	false
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8665-FS(3)	**Injection Vial**	5
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T20:16:16	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1702.79	0.091987	12.3	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	2.32	8224.61	19.535010	17.5	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.34	58262.39	167.243060	158.4	false
PFHxS_2	399.0 / 99.0	2.34	18302.70	185.779091	140.3	false
PFOA_1	413.0 / 369.0	2.74	28675.74	83.321465	63.4	false
PFOA_2	413.0 / 169.0	2.73	2493.06	117.419727	57.6	false
PFNA_1	463.0 / 419.0	3.14	4190.35	< 0	15.4	false
PFNA_2	463.0 / 219.0	3.13	1883.70	< 0	28.2	false
PFOS_1	499.0 / 80.0	3.08	102291.97	196.020946	89.3	false
PFOS_2	499.0 / 99.0	3.14	15563.85	170.619765	107.5	false
PFDA_1	513.0 / 469.0	3.51	2206.81	< 0	11.7	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.83	1483.83	< 0	15.5	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.08	1446.76	< 0	16.4	false
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.35	767.31	< 0	22.7	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

Created with Analyst Reporter
Printed: 24/10/2018 1:29:52 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**	18-0610_18-0611_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

Created with Analyst Reporter
Printed: 24/10/2018 1:29:57 PM

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:27:43	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	83378.86	255.146181	1181.3	false
d3-MeFOSAA	573.0 / 419.0	3.64	9307.65	153.262673	160.5	false
d5-EtFOSAA	589.0 / 419.0	3.80	11069.66	160.584720	190.1	false
13C5-PFHxA	318.0 / 273.0	1.89	53978.91	265.037881	552.5	false
13C4-PFHpA	367.0 / 322.0	2.30	59454.32	256.591413	770.0	false
13C8-PFOA	421.0 / 376.0	2.72	73559.14	260.972929	2105.8	false
13C9-PFNA	472.0 / 427.0	3.12	82966.73	257.784793	1321.9	false
13C6-PFDA	519.0 / 474.0	3.48	81246.25	246.773110	673.0	false
13C7-PFUnA	570.0 / 525.0	3.80	77126.81	253.601788	7704.2	false
13C2-PFTeDA	715.0 / 670.0	4.56	68651.72	260.201077	1906.3	false
13C3-PFBS	302.0 / 99.0	1.55	22650.61	204.730817	383.7	false
13C3-PFHxS	402.0 / 99.0	2.33	20358.95	203.075227	270.2	false
13C8-PFOS	507.0 / 99.0	3.11	27967.03	246.941588	220.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:01 PM

Sample Name	CR988PB-FS(3)	**Injection Vial**	31
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:15:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	88254.75	240.419361	1490.0	false
d3-MeFOSAA	573.0 / 419.0	3.57	10559.17	179.441134	226.3	false
d5-EtFOSAA	589.0 / 419.0	3.74	12872.22	192.716681	183.4	false
13C5-PFHxA	318.0 / 273.0	1.85	56373.36	217.197361	662.3	false
13C4-PFHpA	367.0 / 322.0	2.26	67843.01	229.752681	1170.3	false
13C8-PFOA	421.0 / 376.0	2.67	81284.64	226.289344	3958.1	false
13C9-PFNA	472.0 / 427.0	3.06	80346.84	195.893000	998.7	false
13C6-PFDA	519.0 / 474.0	3.42	87725.91	237.203250	1638.4	false
13C7-PFUnA	570.0 / 525.0	3.73	85852.01	251.301804	1112.4	false
13C2-PFTeDA	715.0 / 670.0	4.47	73779.12	248.936919	1836.7	false
13C3-PFBS	302.0 / 99.0	1.53	24606.86	229.538524	382.9	false
13C3-PFHxS	402.0 / 99.0	2.28	22781.59	234.520993	255.1	false
13C8-PFOS	507.0 / 99.0	3.06	25521.88	232.571615	249.7	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:06 PM

Sample Name	CR989LCS-FS(3)	**Injection Vial**	32
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:26:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	78318.62	204.799810	779.9	false
d3-MeFOSAA	573.0 / 419.0	3.57	8877.75	166.741621	160.7	false
d5-EtFOSAA	589.0 / 419.0	3.74	12611.35	208.677740	166.2	false
13C5-PFHxA	318.0 / 273.0	1.85	50301.97	212.350922	512.4	false
13C4-PFHpA	367.0 / 322.0	2.26	52822.00	196.001248	818.2	false
13C8-PFOA	421.0 / 376.0	2.67	70231.55	214.228063	934.3	false
13C9-PFNA	472.0 / 427.0	3.06	73770.60	197.070647	973.8	false
13C6-PFDA	519.0 / 474.0	3.41	72905.50	189.228348	1907.5	false
13C7-PFUnA	570.0 / 525.0	3.73	78336.05	220.110097	1002.2	false
13C2-PFTeDA	715.0 / 670.0	4.47	68100.65	220.566870	1513.5	false
13C3-PFBS	302.0 / 99.0	1.52	23680.55	244.140518	311.6	false
13C3-PFHxS	402.0 / 99.0	2.28	20263.40	230.546585	288.9	false
13C8-PFOS	507.0 / 99.0	3.05	21716.14	218.713405	198.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:10 PM

Sample Name	J8658-FS(3)	**Injection Vial**	33
Sample ID	VC-CS12-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:37:17	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	78425.69	209.427231	1290.6	false
d3-MeFOSAA	573.0 / 419.0	3.58	9432.84	170.928267	177.7	false
d5-EtFOSAA	589.0 / 419.0	3.74	10858.50	173.346368	169.7	false
13C5-PFHxA	318.0 / 273.0	1.85	54358.79	217.293312	675.7	false
13C4-PFHpA	367.0 / 322.0	2.26	56200.92	197.467166	788.4	false
13C8-PFOA	421.0 / 376.0	2.67	74200.47	214.317783	1532.6	false
13C9-PFNA	472.0 / 427.0	3.06	66930.36	169.304805	131191.9	false
13C6-PFDA	519.0 / 474.0	3.41	77267.69	204.801963	1613.9	false
13C7-PFUnA	570.0 / 525.0	3.73	73542.01	211.020231	974.1	false
13C2-PFTeDA	715.0 / 670.0	4.48	61267.86	202.643190	1728.9	false
13C3-PFBS	302.0 / 99.0	1.52	22672.15	225.512819	399.5	false
13C3-PFHxS	402.0 / 99.0	2.29	20381.36	223.722588	267.2	false
13C8-PFOS	507.0 / 99.0	3.06	22506.71	218.693164	196.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:15 PM

Sample Name	J8659-FS(3)	**Injection Vial**	34
Sample ID	VC-CS12-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:48:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	97426.54	205.953163	1454.2	false
d3-MeFOSAA	573.0 / 419.0	3.58	10189.73	130.031403	155.3	true
d5-EtFOSAA	589.0 / 419.0	3.73	11386.45	128.011058	192.9	true
13C5-PFHxA	318.0 / 273.0	1.85	63171.45	196.301218	569.2	false
13C4-PFHpA	367.0 / 322.0	2.26	79306.55	216.613768	919.0	false
13C8-PFOA	421.0 / 376.0	2.67	97003.78	217.803971	1259.5	false
13C9-PFNA	472.0 / 427.0	3.06	93299.79	183.464608	867.0	false
13C6-PFDA	519.0 / 474.0	3.41	106546.58	223.558982	867.9	false
13C7-PFUnA	570.0 / 525.0	3.73	103589.43	235.299183	892.6	false
13C2-PFTeDA	715.0 / 670.0	4.47	86123.80	225.496035	2040.5	false
13C3-PFBS	302.0 / 99.0	1.52	30985.58	217.046202	425.9	false
13C3-PFHxS	402.0 / 99.0	2.28	24454.02	189.034466	268.1	false
13C8-PFOS	507.0 / 99.0	3.06	28895.37	197.726699	231.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:19 PM

Sample Name	J8660-FS(3)	**Injection Vial**	35
Sample ID	VC-CS12-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:59:00	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	74792.74	185.201900	1005.2	false
d3-MeFOSAA	573.0 / 419.0	3.58	9006.87	134.146462	163.8	false
d5-EtFOSAA	589.0 / 419.0	3.73	10482.95	137.550576	153.8	false
13C5-PFHxA	318.0 / 273.0	1.85	49558.99	190.575923	640.2	false
13C4-PFHpA	367.0 / 322.0	2.26	60368.73	204.048074	859.1	false
13C8-PFOA	421.0 / 376.0	2.67	74060.63	205.782262	21669960.9	false
13C9-PFNA	472.0 / 427.0	3.06	69092.24	168.129651	752.1	false
13C6-PFDA	519.0 / 474.0	3.42	75485.45	185.528518	1861.3	false
13C7-PFUnA	570.0 / 525.0	3.73	68055.84	181.077798	719.4	false
13C2-PFTeDA	715.0 / 670.0	4.47	61644.59	189.062523	1372.0	false
13C3-PFBS	302.0 / 99.0	1.52	23075.46	188.652522	350.9	false
13C3-PFHxS	402.0 / 99.0	2.28	19383.09	174.877347	263.5	false
13C8-PFOS	507.0 / 99.0	3.06	22547.93	180.079190	222.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:22 PM

Sample Name	J8661-FS(3)	**Injection Vial**	36
Sample ID	VC-CS12-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:09:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	83622.39	225.697045	1374.6	false
d3-MeFOSAA	573.0 / 419.0	3.57	8587.76	146.670489	148.0	false
d5-EtFOSAA	589.0 / 419.0	3.73	10367.97	156.002045	172.9	false
13C5-PFHxA	318.0 / 273.0	1.85	53789.48	212.341242	815.3	false
13C4-PFHpA	367.0 / 322.0	2.25	61744.28	214.244003	713.9	false
13C8-PFOA	421.0 / 376.0	2.67	82372.40	234.959887	1417.4	false
13C9-PFNA	472.0 / 427.0	3.06	74933.40	187.189710	700.0	false
13C6-PFDA	519.0 / 474.0	3.41	84384.96	226.063132	971.4	false
13C7-PFUnA	570.0 / 525.0	3.73	78300.17	227.080475	7578.7	false
13C2-PFTeDA	715.0 / 670.0	4.48	68716.91	229.716076	1215.6	false
13C3-PFBS	302.0 / 99.0	1.52	24139.45	226.306826	354.5	false
13C3-PFHxS	402.0 / 99.0	2.28	19576.57	202.537339	247.9	false
13C8-PFOS	507.0 / 99.0	3.06	21060.49	192.878217	207.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:31 PM

Sample Name	J8662-FS(3)	**Injection Vial**	38
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:31:37	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	82958.46	210.492639	1019.3	false
d3-MeFOSAA	573.0 / 419.0	3.58	10360.41	171.915200	207.6	false
d5-EtFOSAA	589.0 / 419.0	3.73	11915.82	174.194621	201.4	false
13C5-PFHxA	318.0 / 273.0	1.84	52914.82	194.425600	606.7	false
13C4-PFHpA	367.0 / 322.0	2.26	62403.11	201.538148	599.7	false
13C8-PFOA	421.0 / 376.0	2.67	82136.27	218.065057	1406.9	false
13C9-PFNA	472.0 / 427.0	3.06	79566.21	185.001097	801.6	false
13C6-PFDA	519.0 / 474.0	3.41	81229.92	204.575529	1397.4	false
13C7-PFUnA	570.0 / 525.0	3.73	80075.70	218.318616	842.3	false
13C2-PFTeDA	715.0 / 670.0	4.47	67624.16	212.521362	1588.0	false
13C3-PFBS	302.0 / 99.0	1.52	27217.50	247.909213	338.9	false
13C3-PFHxS	402.0 / 99.0	2.28	21661.56	217.737083	244.3	false
13C8-PFOS	507.0 / 99.0	3.06	25525.40	227.123186	229.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:35 PM

Sample Name	J8663-FS(3)	**Injection Vial**	39
Sample ID	VC-CS12-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:42:29	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	76319.22	210.096631	907.6	false
d3-MeFOSAA	573.0 / 419.0	3.57	9969.60	145.022436	163.0	false
d5-EtFOSAA	589.0 / 419.0	3.73	11450.00	146.736013	231.5	false
13C5-PFHxA	318.0 / 273.0	1.84	51173.35	196.981173	651.0	false
13C4-PFHpA	367.0 / 322.0	2.25	62495.13	211.447209	724.1	false
13C8-PFOA	421.0 / 376.0	2.66	77856.74	216.546983	2588.5	false
13C9-PFNA	472.0 / 427.0	3.06	74330.97	181.059046	3115.2	false
13C6-PFDA	519.0 / 474.0	3.41	81511.47	222.723102	15255.4	false
13C7-PFUnA	570.0 / 525.0	3.73	80970.19	239.510234	823.6	false
13C2-PFTeDA	715.0 / 670.0	4.47	70804.86	241.419722	1805.0	false
13C3-PFBS	302.0 / 99.0	1.52	24325.98	194.238376	335.2	false
13C3-PFHxS	402.0 / 99.0	2.28	22032.18	194.142425	300.9	false
13C8-PFOS	507.0 / 99.0	3.06	22484.34	175.383772	238.7	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:40 PM

Sample Name	J8664-FS(3)	**Injection Vial**	40
Sample ID	VC-CS12-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:53:22	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	84724.95	213.679067	1157.5	false
d3-MeFOSAA	573.0 / 419.0	3.58	10828.65	163.991916	241.2	false
d5-EtFOSAA	589.0 / 419.0	3.73	11820.98	157.715850	148.1	false
13C5-PFHxA	318.0 / 273.0	1.85	56500.88	219.590393	504.4	false
13C4-PFHpA	367.0 / 322.0	2.26	67119.21	229.287187	896.8	false
13C8-PFOA	421.0 / 376.0	2.67	81706.04	229.449567	4708.5	false
13C9-PFNA	472.0 / 427.0	3.06	78569.05	193.232016	809.2	false
13C6-PFDA	519.0 / 474.0	3.41	84758.14	212.174636	14429.3	false
13C7-PFUnA	570.0 / 525.0	3.73	82850.63	224.522682	857.1	false
13C2-PFTeDA	715.0 / 670.0	4.48	71364.26	222.923527	1085.9	false
13C3-PFBS	302.0 / 99.0	1.52	23949.43	199.090474	335.5	false
13C3-PFHxS	402.0 / 99.0	2.28	22526.32	206.653986	282.4	false
13C8-PFOS	507.0 / 99.0	3.06	24837.20	201.698411	214.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:48 PM

Sample Name	J8666-FS(3)	**Injection Vial**	43
Sample ID	VC-CS12-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:36:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	88208.54	195.400690	1371.9	false
d3-MeFOSAA	573.0 / 419.0	3.57	9627.92	140.523936	186.5	false
d5-EtFOSAA	589.0 / 419.0	3.73	10804.35	138.928157	178.6	false
13C5-PFHxA	318.0 / 273.0	1.84	53699.18	183.092444	491.6	false
13C4-PFHpA	367.0 / 322.0	2.25	66957.21	200.666544	846.8	false
13C8-PFOA	421.0 / 376.0	2.67	85878.36	211.573601	2899.0	false
13C9-PFNA	472.0 / 427.0	3.06	78021.57	168.339841	1497.1	false
13C6-PFDA	519.0 / 474.0	3.41	87878.71	193.223751	1390.4	false
13C7-PFUnA	570.0 / 525.0	3.73	88664.75	211.047518	1128.7	false
13C2-PFTeDA	715.0 / 670.0	4.47	69899.10	191.783629	1802.9	false
13C3-PFBS	302.0 / 99.0	1.52	25421.15	203.666820	346.8	false
13C3-PFHxS	402.0 / 99.0	2.28	22144.12	195.786105	296.7	false
13C8-PFOS	507.0 / 99.0	3.05	24600.34	192.535535	214.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:52 PM

Sample Name	J8671-FS(3)	**Injection Vial**	44
Sample ID	VC-CS10-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:47:42	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	93969.10	214.287951	1273.9	false
d3-MeFOSAA	573.0 / 419.0	3.57	10884.45	146.705634	164.8	false
d5-EtFOSAA	589.0 / 419.0	3.73	12616.75	149.817090	177.1	false
13C5-PFHxA	318.0 / 273.0	1.85	61762.37	216.710776	613.7	false
13C4-PFHpA	367.0 / 322.0	2.25	68932.58	212.596432	1074.5	false
13C8-PFOA	421.0 / 376.0	2.67	85998.66	218.033504	1257.0	false
13C9-PFNA	472.0 / 427.0	3.06	87379.92	194.016058	834.5	false
13C6-PFDA	519.0 / 474.0	3.41	97486.46	220.657329	16879.3	false
13C7-PFUnA	570.0 / 525.0	3.73	96271.31	235.897507	1447.7	false
13C2-PFTeDA	715.0 / 670.0	4.47	74083.93	209.247937	1797.4	false
13C3-PFBS	302.0 / 99.0	1.52	26493.71	196.015372	380.0	false
13C3-PFHxS	402.0 / 99.0	2.28	23357.63	190.710345	266.5	false
13C8-PFOS	507.0 / 99.0	3.06	25275.20	182.678080	281.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:57 PM

Sample Name	J8672-FS(3)	**Injection Vial**	45
Sample ID	VC-CS10-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:58:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	87977.18	214.461306	942.7	false
d3-MeFOSAA	573.0 / 419.0	3.57	10374.84	166.694532	172.0	false
d5-EtFOSAA	589.0 / 419.0	3.73	12597.90	178.324872	221.9	false
13C5-PFHxA	318.0 / 273.0	1.85	55944.84	217.415128	558.8	false
13C4-PFHpA	367.0 / 322.0	2.25	63605.39	217.269371	865.1	false
13C8-PFOA	421.0 / 376.0	2.67	80557.94	226.210643	1160.2	false
13C9-PFNA	472.0 / 427.0	3.06	82314.82	202.431101	1098.6	false
13C6-PFDA	519.0 / 474.0	3.41	89541.97	216.654118	1006.8	false
13C7-PFUnA	570.0 / 525.0	3.73	82982.56	217.359956	717.8	false
13C2-PFTeDA	715.0 / 670.0	4.47	72639.99	219.320486	2076.5	false
13C3-PFBS	302.0 / 99.0	1.52	26162.67	230.743376	396.4	false
13C3-PFHxS	402.0 / 99.0	2.28	22920.14	223.081030	278.2	false
13C8-PFOS	507.0 / 99.0	3.06	22661.17	195.242391	284.9	false

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Summary Quant Report

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Printed: 24/10/2018 1:31:01 PM

Sample Name	J8673-FS(3)	**Injection Vial**	46
Sample ID	VC-CS10-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:09:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	88642.84	223.456739	865.8	false
d3-MeFOSAA	573.0 / 419.0	3.57	11003.44	201.007151	168.4	false
d5-EtFOSAA	589.0 / 419.0	3.73	13676.07	220.098910	214.5	false
13C5-PFHxA	318.0 / 273.0	1.85	56149.66	220.020266	799.4	false
13C4-PFHpA	367.0 / 322.0	2.25	66231.52	228.115709	895.2	false
13C8-PFOA	421.0 / 376.0	2.66	79920.28	226.280722	358.3	false
13C9-PFNA	472.0 / 427.0	3.06	83241.53	206.407334	1221.4	false
13C6-PFDA	519.0 / 474.0	3.41	84938.43	212.527638	875.7	false
13C7-PFUnA	570.0 / 525.0	3.73	88437.64	239.552507	668.2	false
13C2-PFTeDA	715.0 / 670.0	4.47	71917.73	224.548549	1382.9	false
13C3-PFBS	302.0 / 99.0	1.52	25598.80	256.690460	442.5	false
13C3-PFHxS	402.0 / 99.0	2.28	20874.34	230.994240	300.2	false
13C8-PFOS	507.0 / 99.0	3.05	20755.54	203.314664	206.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:31:05 PM

Sample Name	J8674-FS(3)	**Injection Vial**	47
Sample ID	VC-CS10-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:20:16	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	81969.76	216.498913	1338.5	false
d3-MeFOSAA	573.0 / 419.0	3.58	11185.22	205.369959	262.6	false
d5-EtFOSAA	589.0 / 419.0	3.73	11763.69	190.287297	188.0	false
13C5-PFHxA	318.0 / 273.0	1.85	52775.02	200.512767	603.1	false
13C4-PFHpA	367.0 / 322.0	2.26	61236.06	204.501163	665.3	false
13C8-PFOA	421.0 / 376.0	2.67	77006.90	211.406478	1222.1	false
13C9-PFNA	472.0 / 427.0	3.06	73509.97	176.737791	3171.9	false
13C6-PFDA	519.0 / 474.0	3.41	83380.65	218.589230	1311.1	false
13C7-PFUnA	570.0 / 525.0	3.73	80356.03	228.052219	650.1	false
13C2-PFTeDA	715.0 / 670.0	4.47	74498.19	243.709401	1478.9	false
13C3-PFBS	302.0 / 99.0	1.52	24702.18	248.963059	309.1	false
13C3-PFHxS	402.0 / 99.0	2.28	20185.84	224.514655	239.3	false
13C8-PFOS	507.0 / 99.0	3.06	21408.85	210.783930	245.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:31:13 PM

Sample Name	J8675-FS(3)	**Injection Vial**	48
Sample ID	VC-CS10-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:31:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	85011.55	222.378069	987.2	false
d3-MeFOSAA	573.0 / 419.0	3.57	11191.18	164.146494	189.6	false
d5-EtFOSAA	589.0 / 419.0	3.73	11918.91	154.016015	209.6	false
13C5-PFHxA	318.0 / 273.0	1.85	57814.60	219.368627	564.2	false
13C4-PFHpA	367.0 / 322.0	2.26	65695.27	219.101834	858.8	false
13C8-PFOA	421.0 / 376.0	2.67	82039.76	224.924297	2490.2	false
13C9-PFNA	472.0 / 427.0	3.06	76998.47	184.879430	1310.3	false
13C6-PFDA	519.0 / 474.0	3.41	84528.64	219.472086	727.2	false
13C7-PFUnA	570.0 / 525.0	3.73	85843.51	241.287741	1138.3	false
13C2-PFTeDA	715.0 / 670.0	4.47	75097.83	243.313338	2026.5	false
13C3-PFBS	302.0 / 99.0	1.52	24460.60	196.938233	321.8	false
13C3-PFHxS	402.0 / 99.0	2.28	22023.23	195.678126	296.3	false
13C8-PFOS	507.0 / 99.0	3.06	25274.01	198.784111	234.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:31:18 PM

Sample Name	J8676-FS(3)	**Injection Vial**	49
Sample ID	VC-CS10-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:41:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	85469.90	215.147126	1104.1	false
d3-MeFOSAA	573.0 / 419.0	3.57	10276.72	151.056710	177.9	false
d5-EtFOSAA	589.0 / 419.0	3.73	12467.26	161.446998	166.9	false
13C5-PFHxA	318.0 / 273.0	1.84	58533.80	220.101275	544.4	false
13C4-PFHpA	367.0 / 322.0	2.26	63290.34	209.183847	1263.5	false
13C8-PFOA	421.0 / 376.0	2.67	84840.82	230.513147	1447.7	false
13C9-PFNA	472.0 / 427.0	3.06	80662.13	191.935387	1381.5	false
13C6-PFDA	519.0 / 474.0	3.41	90223.18	225.424894	1485.3	false
13C7-PFUnA	570.0 / 525.0	3.73	85731.09	231.885971	663.3	false
13C2-PFTeDA	715.0 / 670.0	4.47	73117.93	227.966364	1604.8	false
13C3-PFBS	302.0 / 99.0	1.52	22851.40	184.376439	344.0	false
13C3-PFHxS	402.0 / 99.0	2.28	23832.27	212.205310	294.7	false
13C8-PFOS	507.0 / 99.0	3.06	24264.08	191.249814	186.1	false

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Summary Quant Report

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T19:43:39	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.13	97310.49	273.295459	980.3	false
d3-MeFOSAA	573.0 / 419.0	3.67	16307.83	281.326372	235.0	false
d5-EtFOSAA	589.0 / 419.0	3.83	16106.82	244.792248	231.9	false
13C5-PFHxA	318.0 / 273.0	1.90	58984.04	281.414077	800.8	false
13C4-PFHpA	367.0 / 322.0	2.32	65679.00	275.430947	858.6	false
13C8-PFOA	421.0 / 376.0	2.74	77309.52	266.513537	15903.8	false
13C9-PFNA	472.0 / 427.0	3.14	83779.99	252.942124	2153.8	false
13C6-PFDA	519.0 / 474.0	3.51	92389.14	257.546154	881.9	false
13C7-PFUnA	570.0 / 525.0	3.83	86079.46	259.768255	929.9	false
13C2-PFTeDA	715.0 / 670.0	4.61	88378.85	307.429555	1950.9	false
13C3-PFBS	302.0 / 99.0	1.56	23436.89	221.932706	376.1	false
13C3-PFHxS	402.0 / 99.0	2.35	21461.26	224.271849	408.3	false
13C8-PFOS	507.0 / 99.0	3.14	25206.28	233.171040	198.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:32:40 PM

Sample Name	J8665-FS(3)	**Injection Vial**	5
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T20:16:16	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	91963.85	237.780000	1298.5	false
d3-MeFOSAA	573.0 / 419.0	3.65	10462.90	174.702264	168.7	false
d5-EtFOSAA	589.0 / 419.0	3.81	11557.58	170.014975	204.1	false
13C5-PFHxA	318.0 / 273.0	1.89	52541.97	215.834609	602.5	false
13C4-PFHpA	367.0 / 322.0	2.31	60412.48	218.130429	863.4	false
13C8-PFOA	421.0 / 376.0	2.73	72593.27	215.469630	1267.7	false
13C9-PFNA	472.0 / 427.0	3.12	82883.79	215.453639	2616.8	false
13C6-PFDA	519.0 / 474.0	3.48	83624.81	214.612348	8074.6	false
13C7-PFUnA	570.0 / 525.0	3.81	82709.90	229.789129	871.7	false
13C2-PFTeDA	715.0 / 670.0	4.57	76668.87	245.528400	1480.5	false
13C3-PFBS	302.0 / 99.0	1.55	24034.57	220.287572	487.0	false
13C3-PFHxS	402.0 / 99.0	2.33	21475.73	217.219958	351.9	false
13C8-PFOS	507.0 / 99.0	3.12	27040.67	242.111639	212.2	false

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 24/10/2018 1:39:59 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**	18-0610_18-0611_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

Created with Analyst Reporter
Printed: 24/10/2018 1:40:03 PM

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:27:43	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	ü
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	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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Printed: 24/10/2018 1:40:09 PM

Sample Name	CR988PB-FS(3)	**Injection Vial**	31
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:15:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.240	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.230	0.174	ü
PFDA_1	513.0 / 469.0	3.45	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	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	CR989LCS-FS(3)	**Injection Vial**	32
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:26:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.27	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	0.280	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	3.07	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	0.170	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	0.570	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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Sample Name	J8658-FS(3)	**Injection Vial**	33
Sample ID	VC-CS12-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:37:17	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.55	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	2.30	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	0.080	0.065	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.280	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	3.44	PFDA	0.070	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	4.01	PFDoA	0.200	0.160	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.23	PFTrDA	0.120	0.066	
PFTeDA_1	713.0 / 669.0	4.48	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.070	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	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	J8659-FS(3)	**Injection Vial**	34
Sample ID	VC-CS12-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:48:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.090	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	2.67	PFOA	0.090	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	3.04	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.160	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	4.03	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	4.48	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	J8660-FS(3)	**Injection Vial**	35
Sample ID	VC-CS12-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:59:00	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.51	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	2.27	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	0.340	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.59	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.200	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.090	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	3.76	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	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	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	J8661-FS(3)	**Injection Vial**	36
Sample ID	VC-CS12-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:09:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	0.350	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	2.26	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	0.310	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.56	PFOA	0.090	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.480	0.306	
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.200	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	N/A	PFDoA	N/A	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	4.48	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	J8662-FS(3)	**Injection Vial**	38
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:31:37	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	0.290	0.292	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.080	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	0.280	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.64	PFOA	0.090	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	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.40	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	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	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	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	J8663-FS(3)	**Injection Vial**	39
Sample ID	VC-CS12-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:42:29	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	0.430	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	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	0.300	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.61	PFOA	0.090	0.065	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.200	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	3.43	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	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	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	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	J8664-FS(3)	**Injection Vial**	40
Sample ID	VC-CS12-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:53:22	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	0.810	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	2.27	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	0.340	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.090	0.065	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.330	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.200	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	4.04	PFDoA	0.320	0.160	
PFTrDA_1	663.0 / 619.0	4.25	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	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	J8666-FS(3)	**Injection Vial**	43
Sample ID	VC-CS12-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:36:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.68	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	0.500	0.306	
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.110	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	4.01	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	
PFTrDA_1	663.0 / 619.0	4.25	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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Sample Name	J8671-FS(3)	**Injection Vial**	44
Sample ID	VC-CS10-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:47:42	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.28	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	2.30	PFHxS	0.410	0.282	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.070	0.065	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.420	0.306	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.200	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	3.71	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	N/A	PFDoA	N/A	0.160	
PFTrDA_1	663.0 / 619.0	4.21	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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Sample Name	J8672-FS(3)	**Injection Vial**	45
Sample ID	VC-CS10-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:58:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	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	0.320	0.282	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.110	0.065	
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.320	0.306	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.100	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	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	ü
PFTrDA_1	663.0 / 619.0	4.25	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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Sample Name	J8673-FS(3)	**Injection Vial**	46
Sample ID	VC-CS10-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:09:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.68	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.550	0.306	
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	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.01	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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Sample Name	J8674-FS(3)	**Injection Vial**	47
Sample ID	VC-CS10-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:20:16	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.040	0.065	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.330	0.306	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.200	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	3.72	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	N/A	PFDoA	N/A	0.160	
PFTrDA_1	663.0 / 619.0	4.23	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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Sample Name	J8675-FS(3)	**Injection Vial**	48
Sample ID	VC-CS10-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:31:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.67	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	N/A	PFNA	N/A	0.306	
PFOS_1	499.0 / 80.0	3.07	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	4.01	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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Sample Name	J8676-FS(3)	**Injection Vial**	49
Sample ID	VC-CS10-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:41:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	2.67	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.065	
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.360	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	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	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T19:43:39	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.58	PFBS			
PFBS_2	298.9 / 99.0	1.58	PFBS	0.300	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	2.34	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	
PFHxS_1	399.0 / 80.0	2.36	PFHxS			
PFHxS_2	399.0 / 99.0	2.37	PFHxS	0.360	0.282	ü
PFOA_1	413.0 / 369.0	2.75	PFOA			
PFOA_2	413.0 / 169.0	2.75	PFOA	0.090	0.065	ü
PFNA_1	463.0 / 419.0	3.16	PFNA			
PFNA_2	463.0 / 219.0	3.15	PFNA	0.200	0.306	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.174	
PFDA_1	513.0 / 469.0	3.52	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.85	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.13	PFDoA			
PFDoA_2	613.0 / 319.0	4.13	PFDoA	0.290	0.160	
PFTrDA_1	663.0 / 619.0	4.39	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.39	PFTrDA	0.100	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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Sample Name	J8665-FS(3)	**Injection Vial**	5
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T20:16:16	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	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	2.32	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.025	
PFHxS_1	399.0 / 80.0	2.34	PFHxS			
PFHxS_2	399.0 / 99.0	2.34	PFHxS	0.310	0.282	ü
PFOA_1	413.0 / 369.0	2.74	PFOA			
PFOA_2	413.0 / 169.0	2.73	PFOA	0.090	0.065	ü
PFNA_1	463.0 / 419.0	3.14	PFNA			
PFNA_2	463.0 / 219.0	3.13	PFNA	0.450	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.14	PFOS	0.150	0.174	ü
PFDA_1	513.0 / 469.0	3.51	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.041	
PFUnA_1	563.0 / 519.0	3.83	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.049	
PFDoA_1	613.0 / 569.0	4.08	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.160	
PFTrDA_1	663.0 / 619.0	4.35	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

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**	18-0610_18-0611_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

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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	2018-10-19T18:27:43	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	22650.61	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	22650.61	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	53978.91	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	53978.91	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	59454.32	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	59454.32	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	20402.34	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	20402.34	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	73559.14	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	73559.14	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	82966.73	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	82966.73	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	27675.45	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	27675.45	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	81246.25	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	81246.25	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	77126.81	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	77126.81	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	83378.86	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	83378.86	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	68651.72	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	68651.72	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	68651.72	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	68651.72	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	9065.50	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9065.50	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11404.63	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11404.63	250.00

Sample Name	CR988PB-FS(3)	**Injection Vial**	31
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:15:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	24606.86	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	24606.86	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	56373.36	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	56373.36	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	67843.01	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	67843.01	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	22229.34	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	22229.34	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	81284.64	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	81284.64	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	80346.84	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	80346.84	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	25668.19	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	25668.19	239.25
PFDA_1	513.0 / 469.0	3.45	13C6-PFDA	519.0 / 474.0	87725.91	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	87725.91	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	85852.01	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	85852.01	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	88254.75	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	88254.75	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	73779.12	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	73779.12	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	73779.12	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	73779.12	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10916.31	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10916.31	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	12238.49	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	12238.49	250.00

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Summary Internal Standard Report

Sample Name	CR989LCS-FS(3)	**Injection Vial**	32
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:26:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	23680.55	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	23680.55	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	50301.97	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	50301.97	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	52822.00	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	52822.00	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	20006.09	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	20006.09	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	70231.55	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	70231.55	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	73770.60	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	73770.60	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	22073.14	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	22073.14	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	72905.50	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	72905.50	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	78336.05	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	78336.05	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	78318.62	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	78318.62	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	68100.65	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	68100.65	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	68100.65	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	68100.65	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	9098.29	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	9098.29	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	12561.98	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	12561.98	250.00

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Summary Internal Standard Report

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Printed: 24/10/2018 1:49:12 PM

Sample Name	J8658-FS(3)	**Injection Vial**	33
Sample ID	VC-CS12-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:37:17	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	22672.15	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	22672.15	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	54358.79	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	54358.79	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	56200.92	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	56200.92	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	20092.93	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	20092.93	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	74200.47	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	74200.47	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	66930.36	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	66930.36	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	23195.30	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	23195.30	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	77267.69	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	77267.69	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	73542.01	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	73542.01	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	78425.69	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	78425.69	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	61267.86	250.00
PFTrDA_2	663.0 / 169.0	4.23	13C2-PFTeDA	715.0 / 670.0	61267.86	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	61267.86	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	61267.86	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	9601.55	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9601.55	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	10950.22	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	10950.22	250.00

Sample Name	J8659-FS(3)	**Injection Vial**	34
Sample ID	VC-CS12-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:48:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	30985.58	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	30985.58	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	63171.45	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	63171.45	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	79306.55	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	79306.55	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	24024.98	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	24024.98	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	97003.78	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	97003.78	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	93299.79	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	93299.79	250.00
PFOS_1	499.0 / 80.0	3.04	13C8-PFOS	507.0 / 99.0	29220.72	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	29220.72	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	106546.58	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	106546.58	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	103589.43	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	103589.43	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	97426.54	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	97426.54	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	86123.80	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	86123.80	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	86123.80	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	86123.80	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10477.08	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10477.08	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11389.20	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11389.20	250.00

Sample Name	J8660-FS(3)	**Injection Vial**	35
Sample ID	VC-CS12-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:59:00	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	23075.46	232.25
PFBS_2	298.9 / 99.0	1.51	13C3-PFBS	302.0 / 99.0	23075.46	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	49558.99	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	49558.99	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	60368.73	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	60368.73	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	18987.25	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	18987.25	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	74060.63	250.00
PFOA_2	413.0 / 169.0	2.59	13C8-PFOA	421.0 / 376.0	74060.63	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	69092.24	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	69092.24	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	22540.80	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	22540.80	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	75485.45	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	75485.45	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	68055.84	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	68055.84	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	74792.74	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	74792.74	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	61644.59	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	61644.59	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	61644.59	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	61644.59	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	9309.61	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9309.61	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	10532.13	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	10532.13	250.00

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Summary Internal Standard Report

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Sample Name	J8661-FS(3)	**Injection Vial**	36
Sample ID	VC-CS12-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:09:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	24139.45	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	24139.45	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	53789.48	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	53789.48	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	61744.28	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	61744.28	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	19506.51	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	19506.51	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	82372.40	250.00
PFOA_2	413.0 / 169.0	2.56	13C8-PFOA	421.0 / 376.0	82372.40	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	74933.40	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	74933.40	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	21203.44	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	21203.44	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	84384.96	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	84384.96	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	78300.17	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	78300.17	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	83622.39	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	83622.39	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	68716.91	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	68716.91	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	68716.91	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	68716.91	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	8753.68	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	8753.68	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	10537.30	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	10537.30	250.00

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Summary Internal Standard Report

Sample Name	J8662-FS(3)	**Injection Vial**	38
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:31:37	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	27217.50	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	27217.50	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	52914.82	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	52914.82	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	62403.11	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	62403.11	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	21462.61	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	21462.61	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	82136.27	250.00
PFOA_2	413.0 / 169.0	2.64	13C8-PFOA	421.0 / 376.0	82136.27	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	79566.21	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	79566.21	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	25925.07	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	25925.07	239.25
PFDA_1	513.0 / 469.0	3.40	13C6-PFDA	519.0 / 474.0	81229.92	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	81229.92	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	80075.70	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	80075.70	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	82958.46	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	82958.46	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	67624.16	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	67624.16	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	67624.16	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	67624.16	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10634.06	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10634.06	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	12001.40	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	12001.40	250.00

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Summary Internal Standard Report

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Sample Name	J8663-FS(3)	**Injection Vial**	39
Sample ID	VC-CS12-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:42:29	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	24325.98	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	24325.98	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	51173.35	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	51173.35	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	62495.13	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	62495.13	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	21698.20	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	21698.20	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	77856.74	250.00
PFOA_2	413.0 / 169.0	2.61	13C8-PFOA	421.0 / 376.0	77856.74	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	74330.97	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	74330.97	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	22803.47	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	22803.47	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	81511.47	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	81511.47	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	80970.19	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	80970.19	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	76319.22	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	76319.22	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	70804.86	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	70804.86	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	70804.86	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	70804.86	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	9900.62	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9900.62	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11543.13	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11543.13	250.00

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Summary Internal Standard Report

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Sample Name	J8664-FS(3)	**Injection Vial**	40
Sample ID	VC-CS12-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:53:22	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	23949.43	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	23949.43	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	56500.88	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	56500.88	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	67119.21	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	67119.21	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	21846.84	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	21846.84	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	81706.04	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	81706.04	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	78569.05	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	78569.05	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	25353.20	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	25353.20	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	84758.14	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	84758.14	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	82850.63	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	82850.63	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	84724.95	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	84724.95	250.00
PFTrDA_1	663.0 / 619.0	4.25	13C2-PFTeDA	715.0 / 670.0	71364.26	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	71364.26	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	71364.26	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	71364.26	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10785.59	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10785.59	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11873.98	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11873.98	250.00

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Summary Internal Standard Report

Sample Name	J8666-FS(3)	**Injection Vial**	43
Sample ID	VC-CS12-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:36:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	25421.15	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	25421.15	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	53699.18	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	53699.18	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	66957.21	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	66957.21	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	21488.63	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	21488.63	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	85878.36	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	85878.36	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	78021.57	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	78021.57	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	24708.23	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	24708.23	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	87878.71	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	87878.71	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	88664.75	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	88664.75	250.00
PFDoA_1	613.0 / 569.0	4.01	13C2-PFDoA	615.0 / 570.0	88208.54	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	88208.54	250.00
PFTrDA_1	663.0 / 619.0	4.25	13C2-PFTeDA	715.0 / 670.0	69899.10	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	69899.10	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	69899.10	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	69899.10	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	9779.77	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	9779.77	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	10399.38	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	10399.38	250.00

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Summary Internal Standard Report

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Sample Name	J8671-FS(3)	**Injection Vial**	44
Sample ID	VC-CS10-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:47:42	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	26493.71	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	26493.71	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	61762.37	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	61762.37	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	68932.58	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	68932.58	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	22919.52	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	22919.52	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	85998.66	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	85998.66	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	87379.92	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	87379.92	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	25188.92	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	25188.92	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	97486.46	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	97486.46	250.00
PFUnA_1	563.0 / 519.0	3.71	13C7-PFUnA	570.0 / 525.0	96271.31	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96271.31	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	93969.10	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	93969.10	250.00
PFTrDA_1	663.0 / 619.0	4.21	13C2-PFTeDA	715.0 / 670.0	74083.93	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74083.93	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	74083.93	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74083.93	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11140.84	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11140.84	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	12822.47	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	12822.47	250.00

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Summary Internal Standard Report

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Sample Name	J8672-FS(3)	**Injection Vial**	45
Sample ID	VC-CS10-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:58:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	26162.67	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	26162.67	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	55944.84	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	55944.84	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	63605.39	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	63605.39	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	22762.81	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	22762.81	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	80557.94	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	80557.94	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	82314.82	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	82314.82	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	22719.18	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	22719.18	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	89541.97	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	89541.97	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	82982.56	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	82982.56	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	87977.18	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	87977.18	250.00
PFTrDA_1	663.0 / 619.0	4.25	13C2-PFTeDA	715.0 / 670.0	72639.99	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	72639.99	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	72639.99	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	72639.99	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10604.86	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10604.86	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	13287.65	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	13287.65	250.00

Sample Name	J8673-FS(3)	**Injection Vial**	46
Sample ID	VC-CS10-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:09:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	25598.80	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	25598.80	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	56149.66	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	56149.66	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	66231.52	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	66231.52	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	20669.10	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	20669.10	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	79920.28	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	79920.28	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	83241.53	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	83241.53	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	20946.56	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	20946.56	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	84938.43	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	84938.43	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	88437.64	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	88437.64	250.00
PFDoA_1	613.0 / 569.0	4.01	13C2-PFDoA	615.0 / 570.0	88642.84	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	88642.84	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	71917.73	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	71917.73	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	71917.73	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	71917.73	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11091.71	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11091.71	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	13614.05	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	13614.05	250.00

Sample Name	J8674-FS(3)	**Injection Vial**	47
Sample ID	VC-CS10-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:20:16	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	24702.18	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	24702.18	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	52775.02	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	52775.02	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	61236.06	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	61236.06	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	20220.46	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	20220.46	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	77006.90	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	77006.90	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	73509.97	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	73509.97	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	21266.56	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	21266.56	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	83380.65	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	83380.65	250.00
PFUnA_1	563.0 / 519.0	3.72	13C7-PFUnA	570.0 / 525.0	80356.03	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	80356.03	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	81969.76	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	81969.76	250.00
PFTrDA_1	663.0 / 619.0	4.23	13C2-PFTeDA	715.0 / 670.0	74498.19	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74498.19	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	74498.19	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74498.19	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11477.01	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11477.01	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11805.82	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11805.82	250.00

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Summary Internal Standard Report

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Sample Name	J8675-FS(3)	**Injection Vial**	48
Sample ID	VC-CS10-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:31:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	24460.60	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	24460.60	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	57814.60	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	57814.60	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	65695.27	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	65695.27	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	21215.09	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	21215.09	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	82039.76	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	82039.76	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	76998.47	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	76998.47	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	25579.03	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	25579.03	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	84528.64	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	84528.64	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	85843.51	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	85843.51	250.00
PFDoA_1	613.0 / 569.0	4.01	13C2-PFDoA	615.0 / 570.0	85011.55	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	85011.55	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	75097.83	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	75097.83	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	75097.83	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	75097.83	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11441.01	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11441.01	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11597.88	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11597.88	250.00

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Summary Internal Standard Report

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Sample Name	J8676-FS(3)	**Injection Vial**	49
Sample ID	VC-CS10-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:41:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	22851.40	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	22851.40	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	58533.80	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	58533.80	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	63290.34	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	63290.34	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	23296.80	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	23296.80	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	84840.82	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	84840.82	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	80662.13	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	80662.13	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	24284.09	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	24284.09	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	90223.18	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	90223.18	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	85731.09	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	85731.09	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	85469.90	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	85469.90	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	73117.93	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	73117.93	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	73117.93	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	73117.93	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10583.84	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10583.84	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	12717.57	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	12717.57	250.00

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Summary Internal Standard 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	2018-10-22T19:43:39	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1.58	13C3-PFBS	302.0 / 99.0	23436.89	232.25
PFBS_2	298.9 / 99.0	1.58	13C3-PFBS	302.0 / 99.0	23436.89	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	58984.04	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	58984.04	250.00
PFHpA_1	363.0 / 319.0	2.34	13C4-PFHpA	367.0 / 322.0	65679.00	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	65679.00	250.00
PFHxS_1	399.0 / 80.0	2.36	13C3-PFHxS	402.0 / 99.0	21362.88	236.50
PFHxS_2	399.0 / 99.0	2.37	13C3-PFHxS	402.0 / 99.0	21362.88	236.50
PFOA_1	413.0 / 369.0	2.75	13C8-PFOA	421.0 / 376.0	77309.52	250.00
PFOA_2	413.0 / 169.0	2.75	13C8-PFOA	421.0 / 376.0	77309.52	250.00
PFNA_1	463.0 / 419.0	3.16	13C9-PFNA	472.0 / 427.0	83779.99	250.00
PFNA_2	463.0 / 219.0	3.15	13C9-PFNA	472.0 / 427.0	83779.99	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	24982.25	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	24982.25	239.25
PFDA_1	513.0 / 469.0	3.52	13C6-PFDA	519.0 / 474.0	92389.14	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	92389.14	250.00
PFUnA_1	563.0 / 519.0	3.85	13C7-PFUnA	570.0 / 525.0	86079.46	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	86079.46	250.00
PFDoA_1	613.0 / 569.0	4.13	13C2-PFDoA	615.0 / 570.0	97310.49	250.00
PFDoA_2	613.0 / 319.0	4.13	13C2-PFDoA	615.0 / 570.0	97310.49	250.00
PFTrDA_1	663.0 / 619.0	4.39	13C2-PFTeDA	715.0 / 670.0	88378.85	250.00
PFTrDA_2	663.0 / 169.0	4.39	13C2-PFTeDA	715.0 / 670.0	88378.85	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	88378.85	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	88378.85	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16077.43	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16077.43	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16446.12	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16446.12	250.00

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Summary Internal Standard Report

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Sample Name	J8665-FS(3)	**Injection Vial**	5
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T20:16:16	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	24034.57	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	24034.57	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	52541.97	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	52541.97	250.00
PFHpA_1	363.0 / 319.0	2.32	13C4-PFHpA	367.0 / 322.0	60412.48	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	60412.48	250.00
PFHxS_1	399.0 / 80.0	2.34	13C3-PFHxS	402.0 / 99.0	21603.49	236.50
PFHxS_2	399.0 / 99.0	2.34	13C3-PFHxS	402.0 / 99.0	21603.49	236.50
PFOA_1	413.0 / 369.0	2.74	13C8-PFOA	421.0 / 376.0	72593.27	250.00
PFOA_2	413.0 / 169.0	2.73	13C8-PFOA	421.0 / 376.0	72593.27	250.00
PFNA_1	463.0 / 419.0	3.14	13C9-PFNA	472.0 / 427.0	82883.79	250.00
PFNA_2	463.0 / 219.0	3.13	13C9-PFNA	472.0 / 427.0	82883.79	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	26299.64	239.25
PFOS_2	499.0 / 99.0	3.14	13C8-PFOS	507.0 / 99.0	26299.64	239.25
PFDA_1	513.0 / 469.0	3.51	13C6-PFDA	519.0 / 474.0	83624.81	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	83624.81	250.00
PFUnA_1	563.0 / 519.0	3.83	13C7-PFUnA	570.0 / 525.0	82709.90	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	82709.90	250.00
PFDoA_1	613.0 / 569.0	4.08	13C2-PFDoA	615.0 / 570.0	91963.85	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	91963.85	250.00
PFTrDA_1	663.0 / 619.0	4.35	13C2-PFTeDA	715.0 / 670.0	76668.87	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76668.87	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	76668.87	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76668.87	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	10161.18	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	10161.18	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	11805.84	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	11805.84	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**	18-0610_18-0611_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	2018-10-19T18:27:43	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	83787.58	250.00
d3-MeFOSAA	573.0 / 419.0	3.64	13C4-PFOS	503.0 / 99.0	28447.31	239.25
d5-EtFOSAA	589.0 / 419.0	3.80	13C4-PFOS	503.0 / 99.0	28447.31	239.25
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	68811.37	250.00
13C4-PFHpA	367.0 / 322.0	2.30	13C2-PFOA	415.0 / 370.0	68811.37	250.00
13C8-PFOA	421.0 / 376.0	2.72	13C2-PFOA	415.0 / 370.0	68811.37	250.00
13C9-PFNA	472.0 / 427.0	3.12	13C2-PFOA	415.0 / 370.0	68811.37	250.00
13C6-PFDA	519.0 / 474.0	3.48	13C2-PFDA	515.0 / 470.0	83787.58	250.00
13C7-PFUnA	570.0 / 525.0	3.80	13C2-PFDA	515.0 / 470.0	83787.58	250.00
13C2-PFTeDA	715.0 / 670.0	4.56	13C2-PFDA	515.0 / 470.0	83787.58	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	28447.31	239.25
13C3-PFHxS	402.0 / 99.0	2.33	13C4-PFOS	503.0 / 99.0	28447.31	239.25
13C8-PFOS	507.0 / 99.0	3.11	13C4-PFOS	503.0 / 99.0	28447.31	239.25

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Summary Internal Standard Report

Sample Name	CR988PB-FS(3)	**Injection Vial**	31
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:15:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	94119.90	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	27564.18	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	27564.18	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	87692.70	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	87692.70	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	87692.70	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	87692.70	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	94119.90	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	94119.90	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	94119.90	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	27564.18	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	27564.18	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	27564.18	239.25

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Summary Internal Standard Report

Sample Name	CR989LCS-FS(3)	**Injection Vial**	32
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:26:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	98050.15	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	24940.00	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	24940.00	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	80034.07	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	80034.07	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	80034.07	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	80034.07	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	98050.15	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	98050.15	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	98050.15	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	24940.00	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	24940.00	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	24940.00	239.25

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Summary Internal Standard Report

Sample Name	J8658-FS(3)	**Injection Vial**	33
Sample ID	VC-CS12-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:37:17	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	96014.76	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	25850.32	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	25850.32	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	84521.55	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	84521.55	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	84521.55	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	84521.55	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	96014.76	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	96014.76	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	96014.76	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	25850.32	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	25850.32	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	25850.32	239.25

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Summary Internal Standard Report

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Sample Name	J8659-FS(3)	**Injection Vial**	34
Sample ID	VC-CS12-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:48:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	121289.05	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	36707.27	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	36707.27	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	108728.13	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	108728.13	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	108728.13	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	108728.13	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	121289.05	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	121289.05	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	121289.05	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	36707.27	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	36707.27	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	36707.27	239.25

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Summary Internal Standard Report

Sample Name	J8660-FS(3)	**Injection Vial**	35
Sample ID	VC-CS12-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:59:00	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	103544.44	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	31450.84	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	31450.84	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	87861.48	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	87861.48	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	87861.48	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	87861.48	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	103544.44	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	103544.44	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	103544.44	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	31450.84	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	31450.84	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	31450.84	239.25

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Summary Internal Standard Report

Sample Name	J8661-FS(3)	**Injection Vial**	36
Sample ID	VC-CS12-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:09:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	94996.92	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	27426.75	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	27426.75	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	85586.84	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	85586.84	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	85586.84	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	85586.84	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	94996.92	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	94996.92	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	94996.92	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27426.75	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	27426.75	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	27426.75	239.25

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Summary Internal Standard Report

Sample Name	J8662-FS(3)	**Injection Vial**	38
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:31:37	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	101050.06	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	28229.30	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	28229.30	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	91953.42	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	91953.42	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	91953.42	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	91953.42	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	101050.06	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	101050.06	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	101050.06	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	28229.30	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	28229.30	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	28229.30	239.25

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Summary Internal Standard Report

Sample Name	J8663-FS(3)	**Injection Vial**	39
Sample ID	VC-CS12-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:42:29	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	93138.16	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	32201.78	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	32201.78	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	87773.44	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	87773.44	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	87773.44	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	87773.44	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	93138.16	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	93138.16	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	93138.16	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	32201.78	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	32201.78	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	32201.78	239.25

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Summary Internal Standard Report

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Sample Name	J8664-FS(3)	**Injection Vial**	40
Sample ID	VC-CS12-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:53:22	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	101662.82	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	30930.67	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30930.67	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	86933.26	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	86933.26	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	86933.26	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	86933.26	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	101662.82	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	101662.82	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	101662.82	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30930.67	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	30930.67	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	30930.67	239.25

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Summary Internal Standard Report

Sample Name	J8666-FS(3)	**Injection Vial**	43
Sample ID	VC-CS12-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:36:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	115743.70	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	32093.67	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	32093.67	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	99092.62	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	99092.62	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	99092.62	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	99092.62	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	115743.70	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	115743.70	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	115743.70	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	32093.67	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	32093.67	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	32093.67	239.25

Sample Name	J8671-FS(3)	**Injection Vial**	44
Sample ID	VC-CS10-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:47:42	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	112434.64	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	34753.40	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	34753.40	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	96291.40	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	96291.40	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	96291.40	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	96291.40	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	112434.64	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	112434.64	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	112434.64	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	34753.40	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	34753.40	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	34753.40	239.25

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Summary Internal Standard Report

Sample Name	J8672-FS(3)	**Injection Vial**	45
Sample ID	VC-CS10-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:58:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	105180.18	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	29153.94	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	29153.94	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	86938.94	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	86938.94	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	86938.94	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	86938.94	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	105180.18	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	105180.18	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	105180.18	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	29153.94	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	29153.94	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	29153.94	239.25

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Summary Internal Standard Report

Sample Name	J8673-FS(3)	**Injection Vial**	46
Sample ID	VC-CS10-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:09:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	101709.85	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	25642.15	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	25642.15	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	86224.06	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	86224.06	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	86224.06	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	86224.06	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	101709.85	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	101709.85	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	101709.85	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	25642.15	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	25642.15	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	25642.15	239.25

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Summary Internal Standard Report

Sample Name	J8674-FS(3)	**Injection Vial**	47
Sample ID	VC-CS10-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:20:16	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	97075.74	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	25512.03	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	25512.03	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	88926.34	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	88926.34	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	88926.34	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	88926.34	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	97075.74	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	97075.74	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	97075.74	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	25512.03	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	25512.03	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	25512.03	239.25

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Summary Internal Standard Report

Sample Name	J8675-FS(3)	**Injection Vial**	48
Sample ID	VC-CS10-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:31:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	98016.41	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	31936.08	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	31936.08	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	89044.49	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	89044.49	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	89044.49	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	89044.49	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	98016.41	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	98016.41	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	98016.41	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	31936.08	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	31936.08	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	31936.08	239.25

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Summary Internal Standard Report

Sample Name	J8676-FS(3)	**Injection Vial**	49
Sample ID	VC-CS10-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:41:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	101856.90	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	31867.79	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	31867.79	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	89852.09	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	89852.09	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	89852.09	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	89852.09	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	101856.90	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	101856.90	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	101856.90	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	31867.79	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	31867.79	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	31867.79	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	2018-10-22T19:43:39	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.13	13C2-PFDA	515.0 / 470.0	91293.54	250.00
d3-MeFOSAA	573.0 / 419.0	3.67	13C4-PFOS	503.0 / 99.0	27153.34	239.25
d5-EtFOSAA	589.0 / 419.0	3.83	13C4-PFOS	503.0 / 99.0	27153.34	239.25
13C5-PFHxA	318.0 / 273.0	1.90	13C2-PFOA	415.0 / 370.0	70816.22	250.00
13C4-PFHpA	367.0 / 322.0	2.32	13C2-PFOA	415.0 / 370.0	70816.22	250.00
13C8-PFOA	421.0 / 376.0	2.74	13C2-PFOA	415.0 / 370.0	70816.22	250.00
13C9-PFNA	472.0 / 427.0	3.14	13C2-PFOA	415.0 / 370.0	70816.22	250.00
13C6-PFDA	519.0 / 474.0	3.51	13C2-PFDA	515.0 / 470.0	91293.54	250.00
13C7-PFUnA	570.0 / 525.0	3.83	13C2-PFDA	515.0 / 470.0	91293.54	250.00
13C2-PFTeDA	715.0 / 670.0	4.61	13C2-PFDA	515.0 / 470.0	91293.54	250.00
13C3-PFBS	302.0 / 99.0	1.56	13C4-PFOS	503.0 / 99.0	27153.34	239.25
13C3-PFHxS	402.0 / 99.0	2.35	13C4-PFOS	503.0 / 99.0	27153.34	239.25
13C8-PFOS	507.0 / 99.0	3.14	13C4-PFOS	503.0 / 99.0	27153.34	239.25

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Summary Internal Standard Report

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Sample Name	J8665-FS(3)	**Injection Vial**	5
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T20:16:16	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	99164.13	250.00
d3-MeFOSAA	573.0 / 419.0	3.65	13C4-PFOS	503.0 / 99.0	28053.75	239.25
d5-EtFOSAA	589.0 / 419.0	3.81	13C4-PFOS	503.0 / 99.0	28053.75	239.25
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	82248.76	250.00
13C4-PFHpA	367.0 / 322.0	2.31	13C2-PFOA	415.0 / 370.0	82248.76	250.00
13C8-PFOA	421.0 / 376.0	2.73	13C2-PFOA	415.0 / 370.0	82248.76	250.00
13C9-PFNA	472.0 / 427.0	3.12	13C2-PFOA	415.0 / 370.0	82248.76	250.00
13C6-PFDA	519.0 / 474.0	3.48	13C2-PFDA	515.0 / 470.0	99164.13	250.00
13C7-PFUnA	570.0 / 525.0	3.81	13C2-PFDA	515.0 / 470.0	99164.13	250.00
13C2-PFTeDA	715.0 / 670.0	4.57	13C2-PFDA	515.0 / 470.0	99164.13	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	28053.75	239.25
13C3-PFHxS	402.0 / 99.0	2.33	13C4-PFOS	503.0 / 99.0	28053.75	239.25
13C8-PFOS	507.0 / 99.0	3.12	13C4-PFOS	503.0 / 99.0	28053.75	239.25

Chromatograms

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Chromatogram Report

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Printed: 24/10/2018 2:00:05 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**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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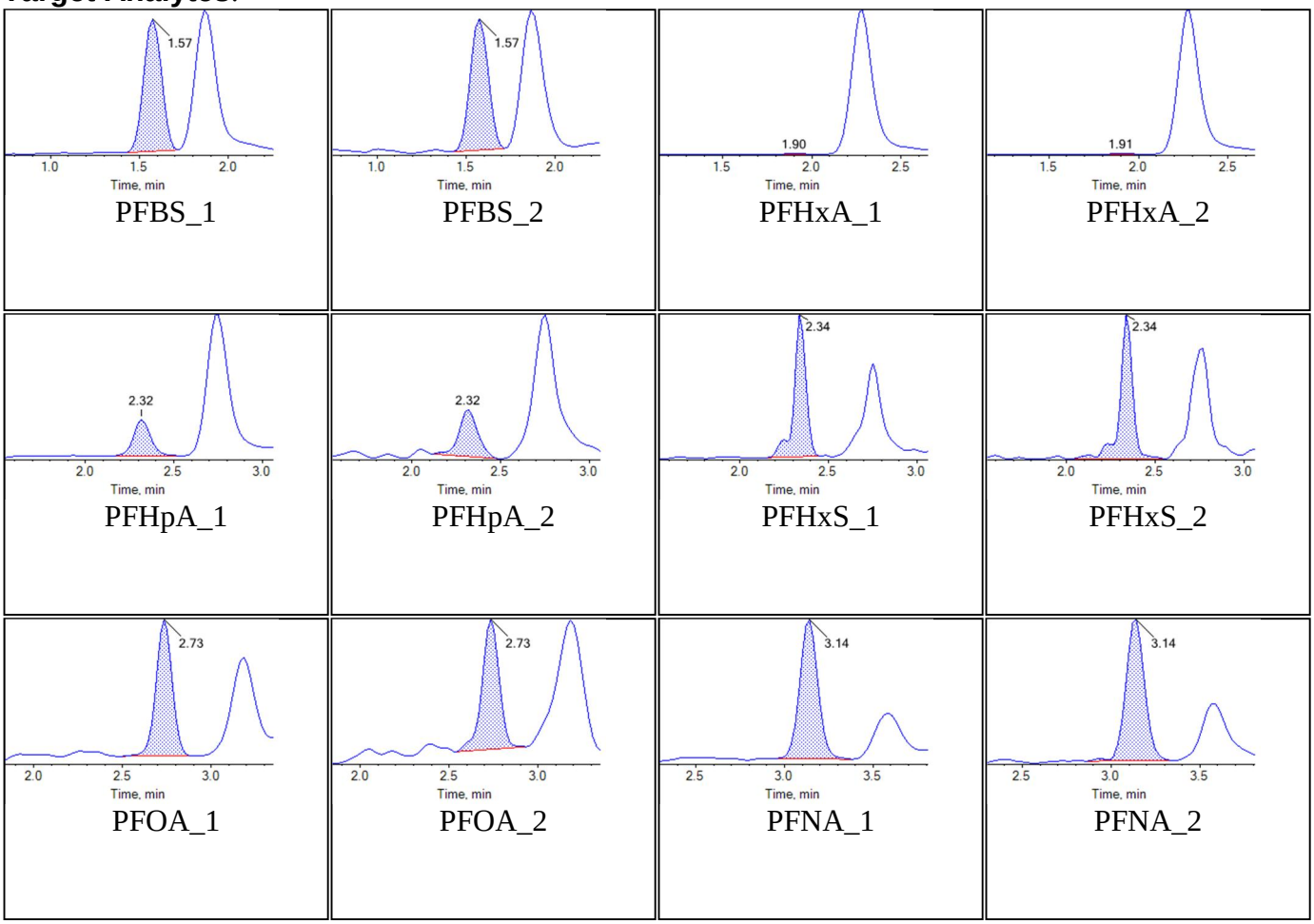

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Chromatogram Report

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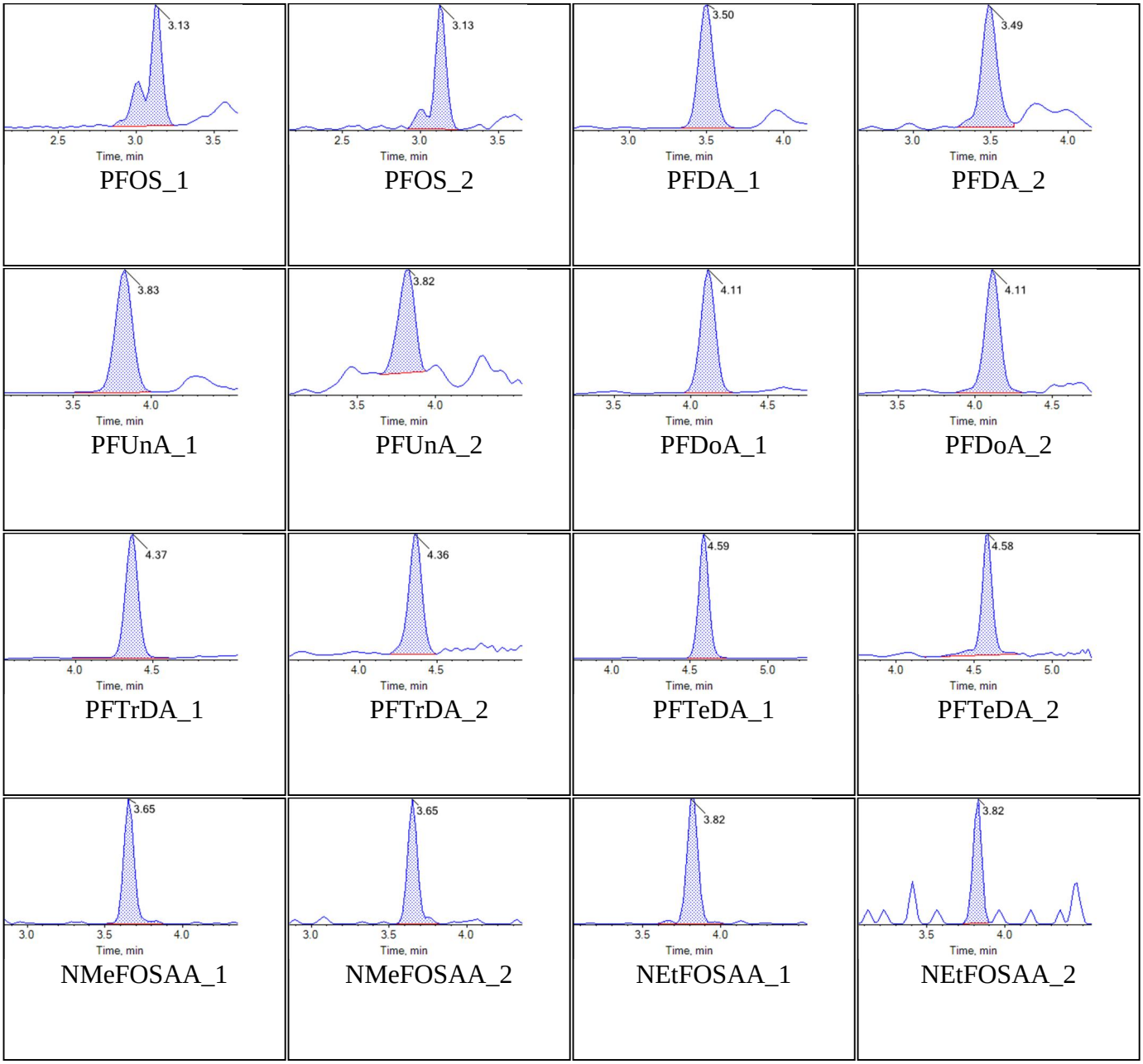

Internal Standards:

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Chromatogram Report

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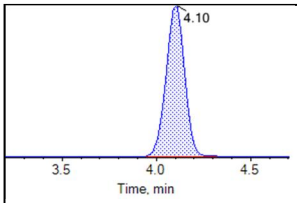
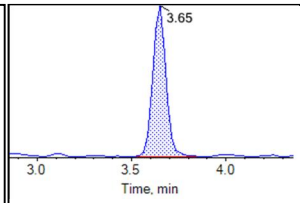
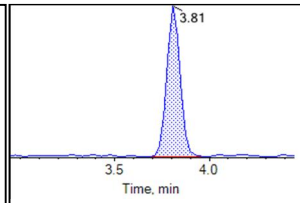


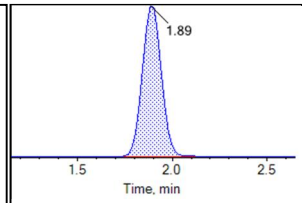
13C2-PFDoA



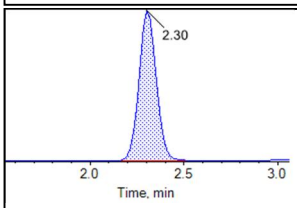
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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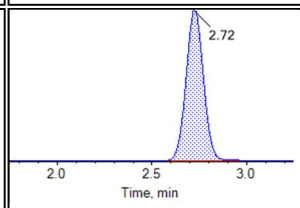
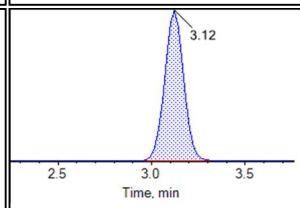
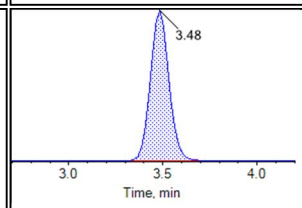


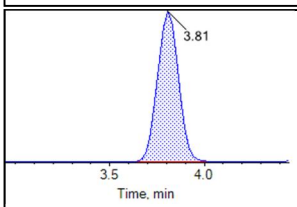
13C8-PFOA



13C9-PFNA



13C6-PFDA



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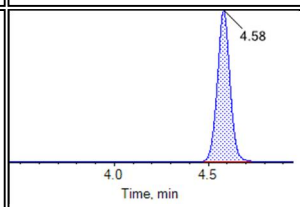
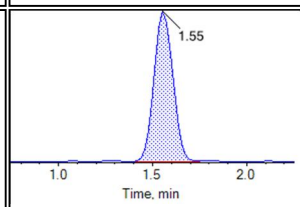
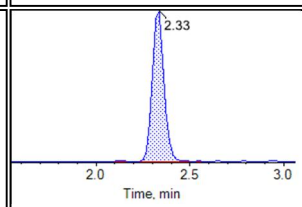


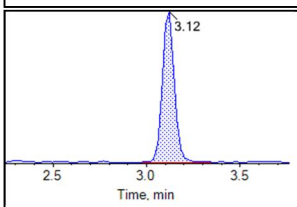
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

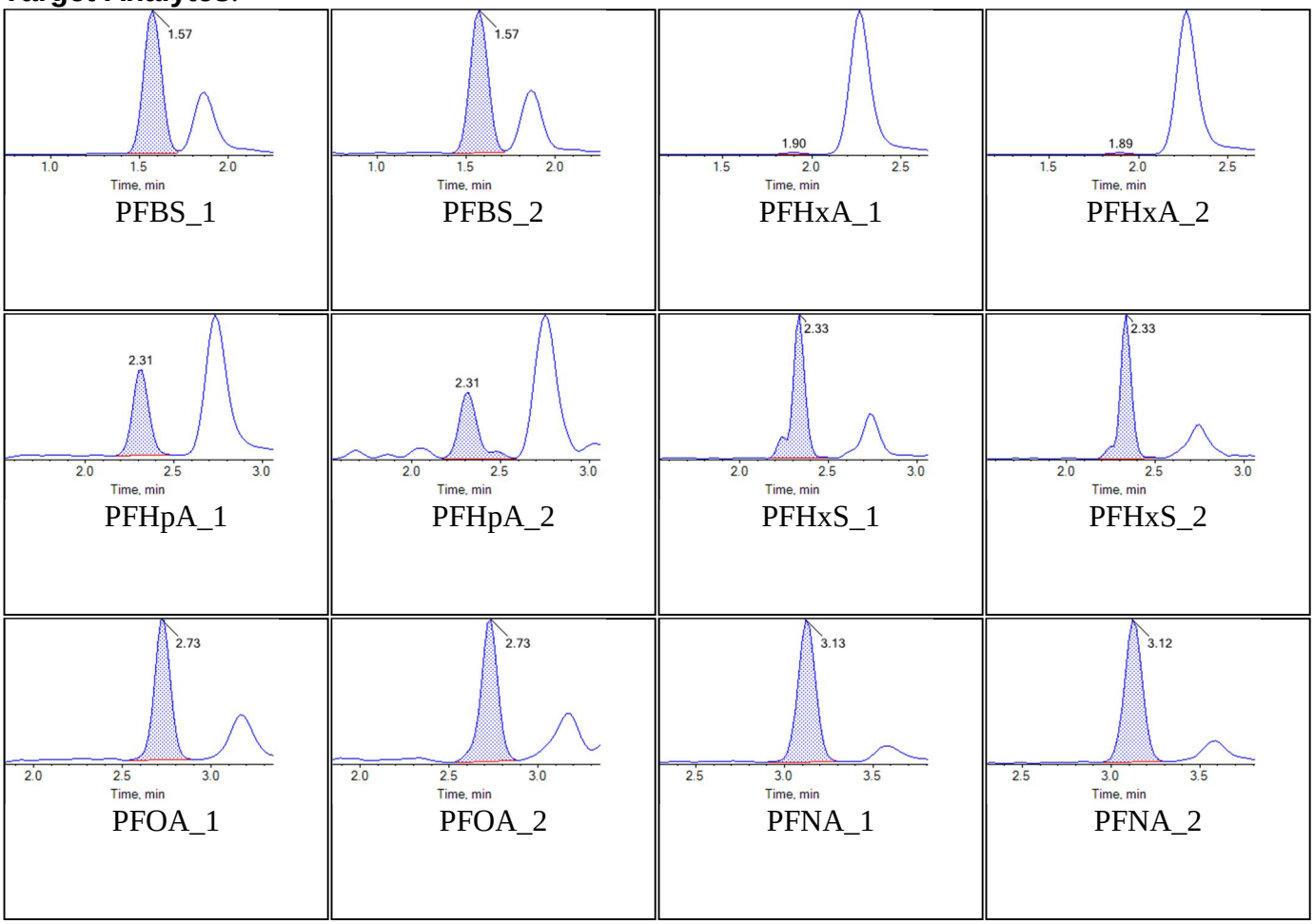
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:11 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**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

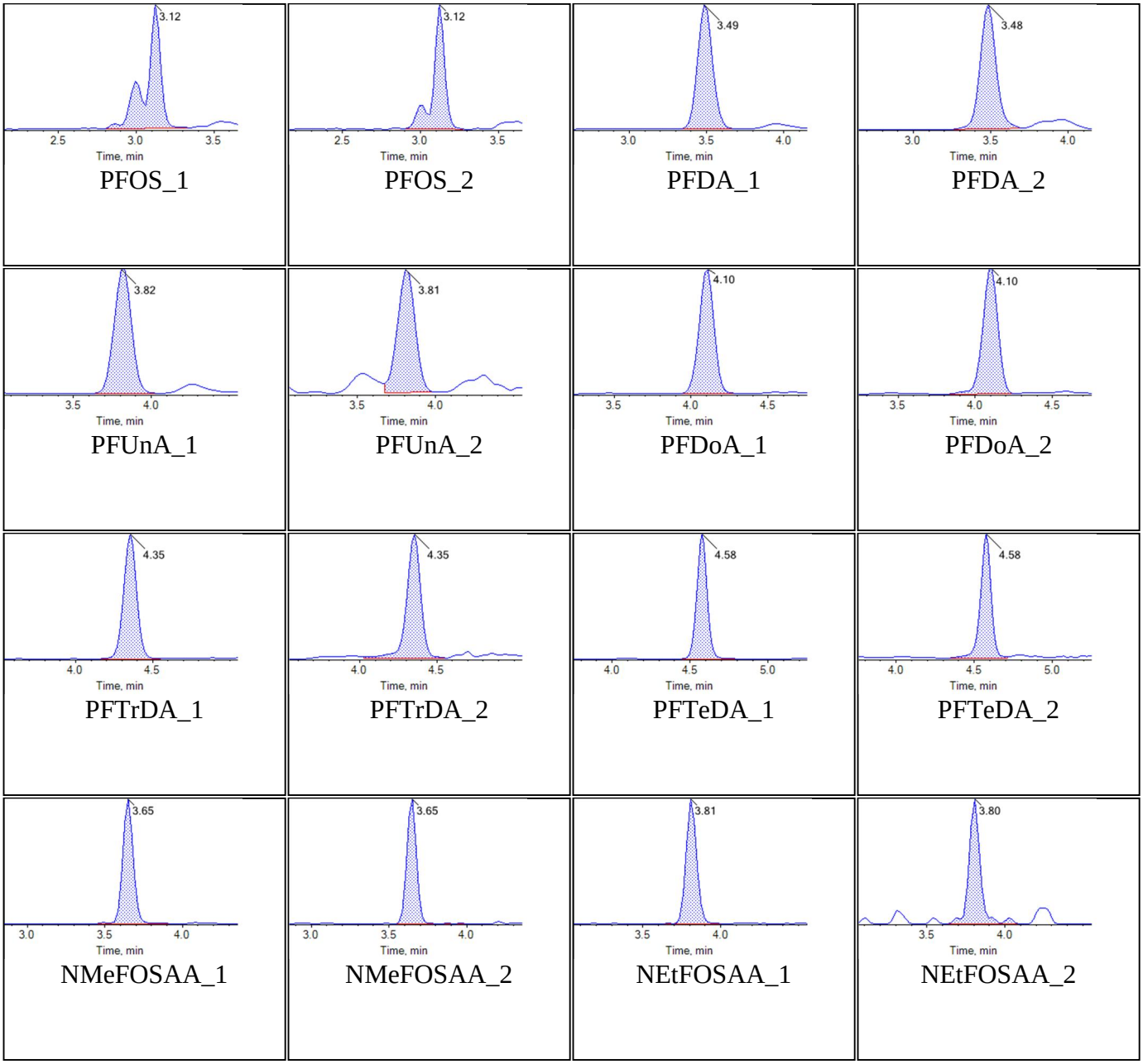
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:11 PM

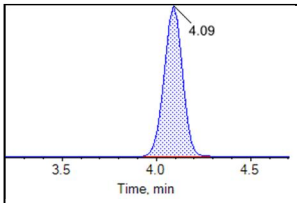


Internal Standards:

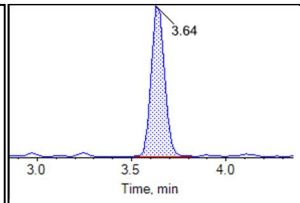
BATTELLE

Chromatogram Report

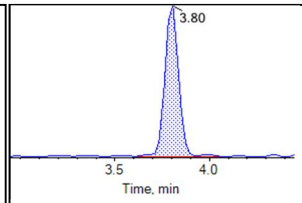
Created with Analyst Reporter
Printed: 24/10/2018 2:00:11 PM



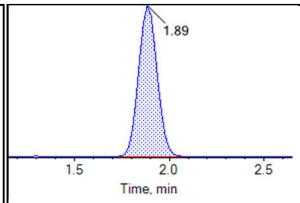
13C2-PFDoA



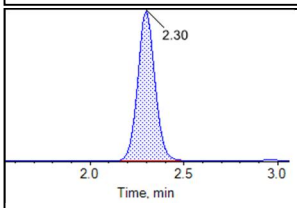
d3-MeFOSAA



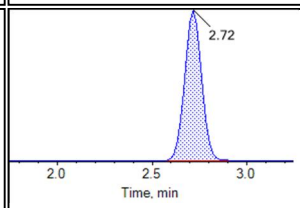
d5-EtFOSAA



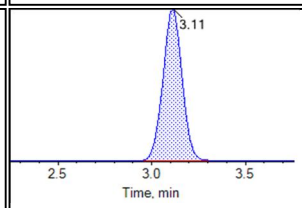
13C5-PFHxA



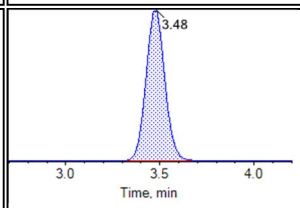
13C4-PFHpA



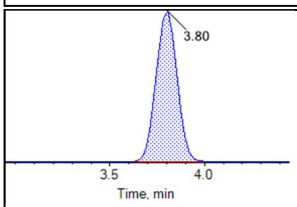
13C8-PFOA



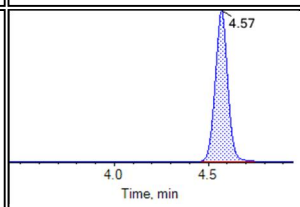
13C9-PFNA



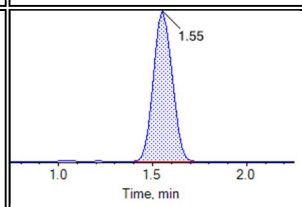
13C6-PFDA



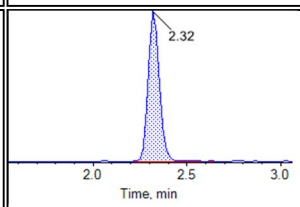
13C7-PFUnA



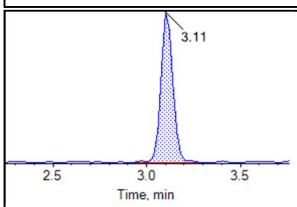
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

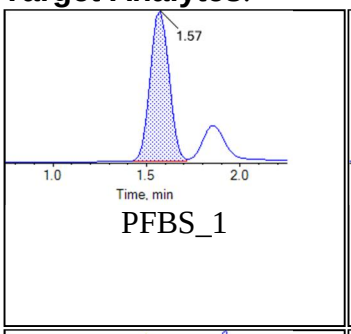
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:19 PM

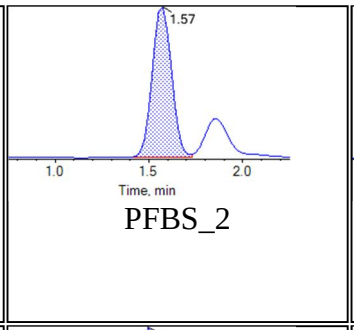
Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:08:39	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

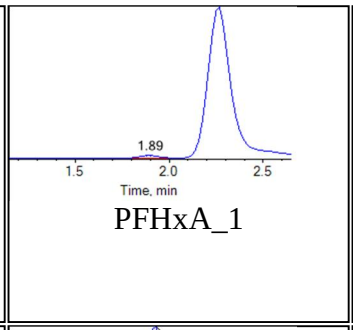
Target Analytes:



PFBS_1



PFBS_2



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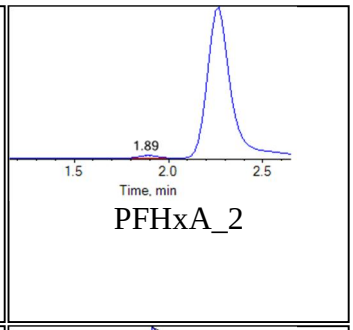

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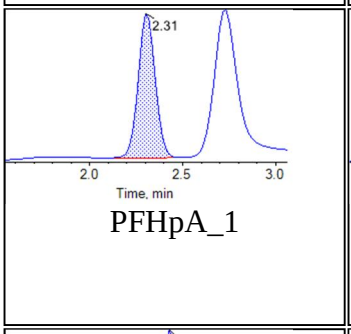

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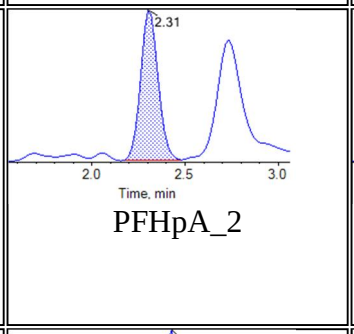

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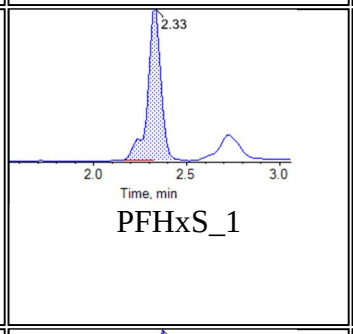
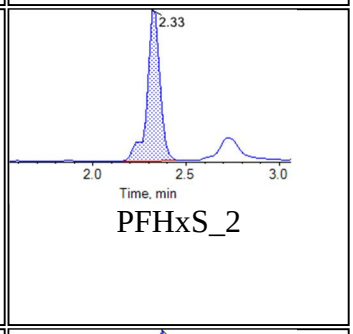
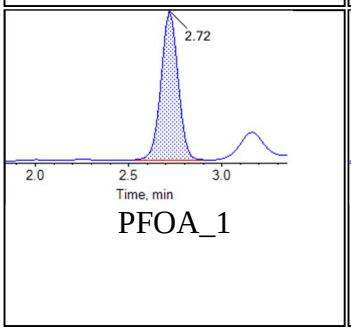


PFHxS_1



PFHxS_2



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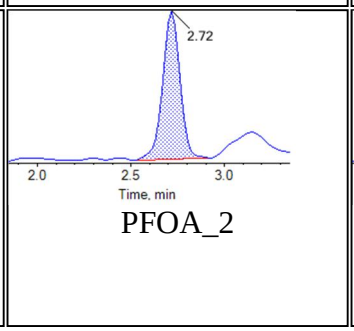

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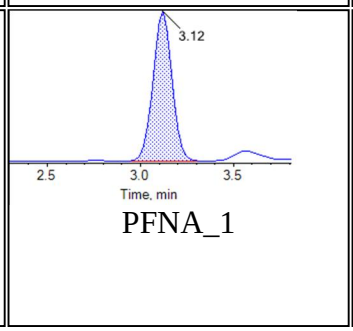
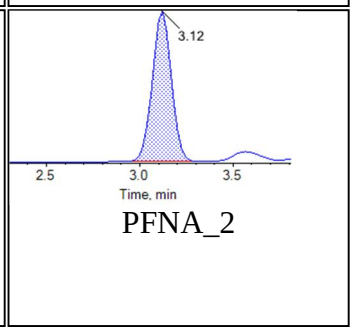


PFNA_1

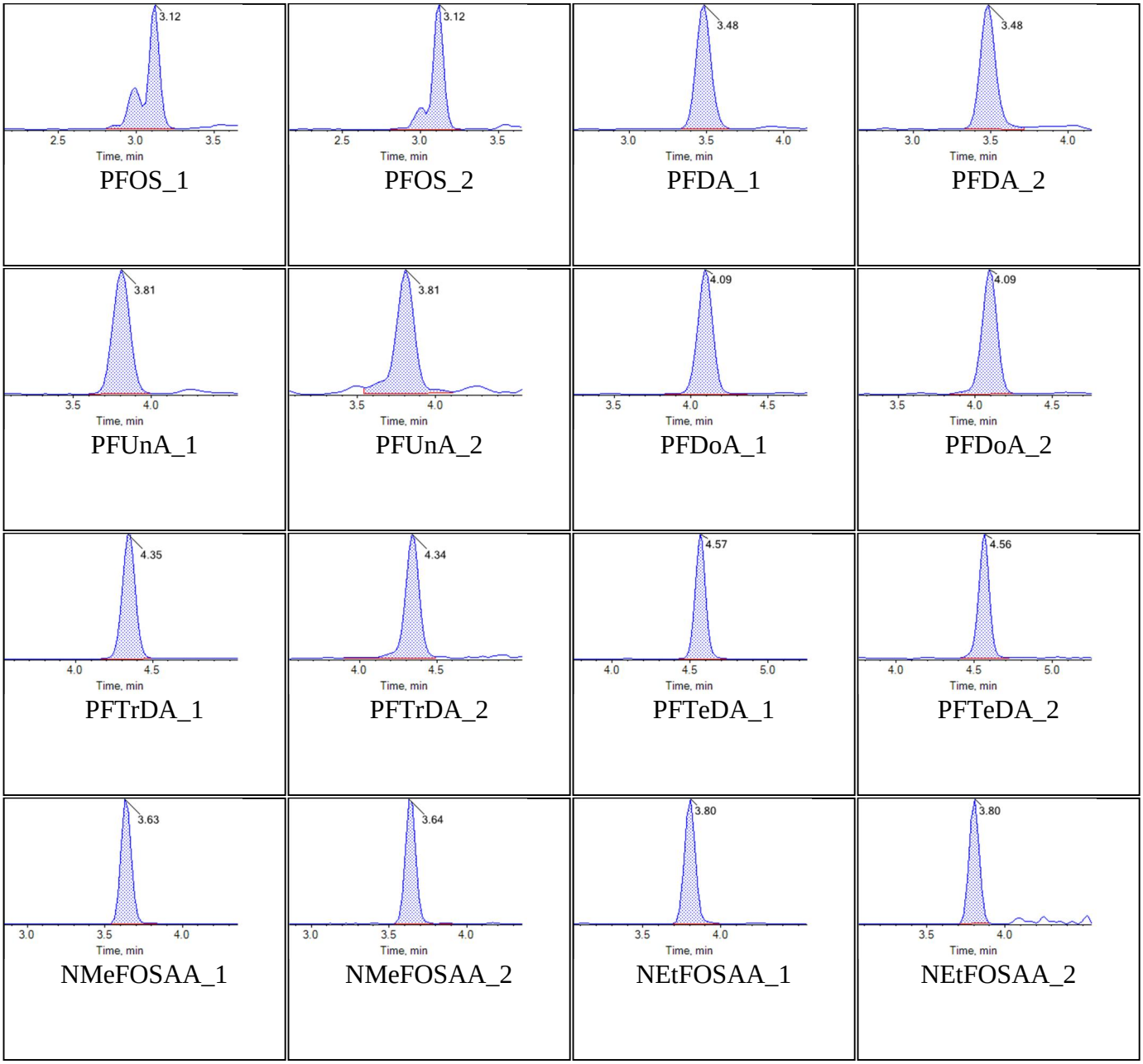


PFNA_2

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:19 PM

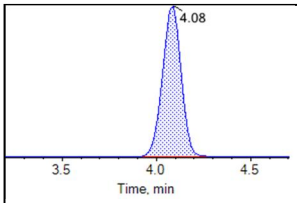


Internal Standards:

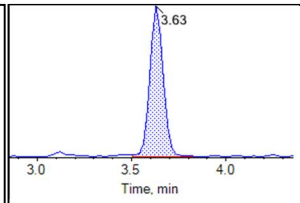
BATTELLE

Chromatogram Report

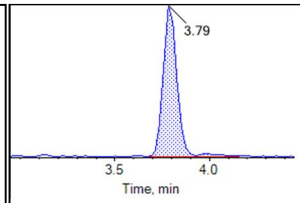
Created with Analyst Reporter
Printed: 24/10/2018 2:00:19 PM



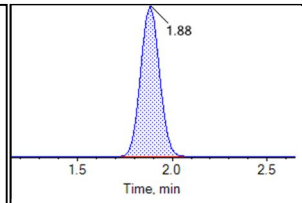
13C2-PFDoA



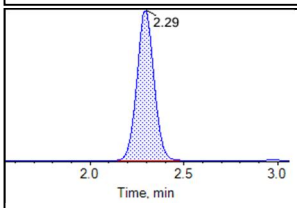
d3-MeFOSAA



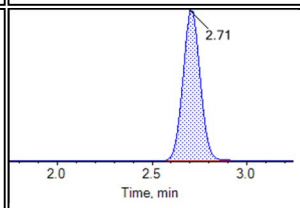
d5-EtFOSAA



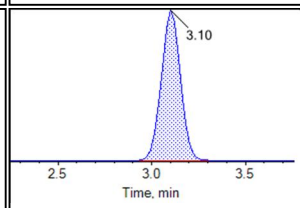
13C5-PFHxA



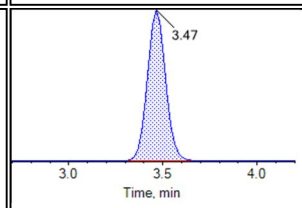
13C4-PFHpA



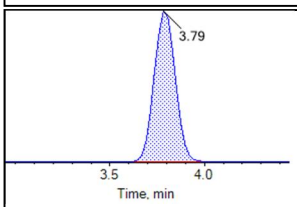
13C8-PFOA



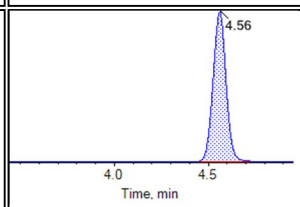
13C9-PFNA



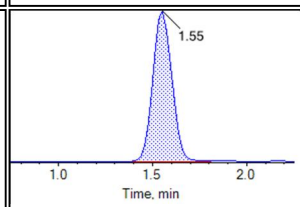
13C6-PFDA



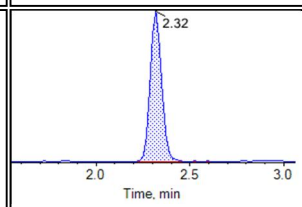
13C7-PFUnA



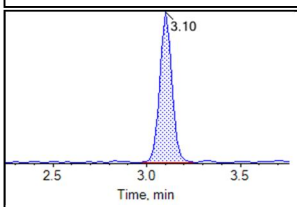
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

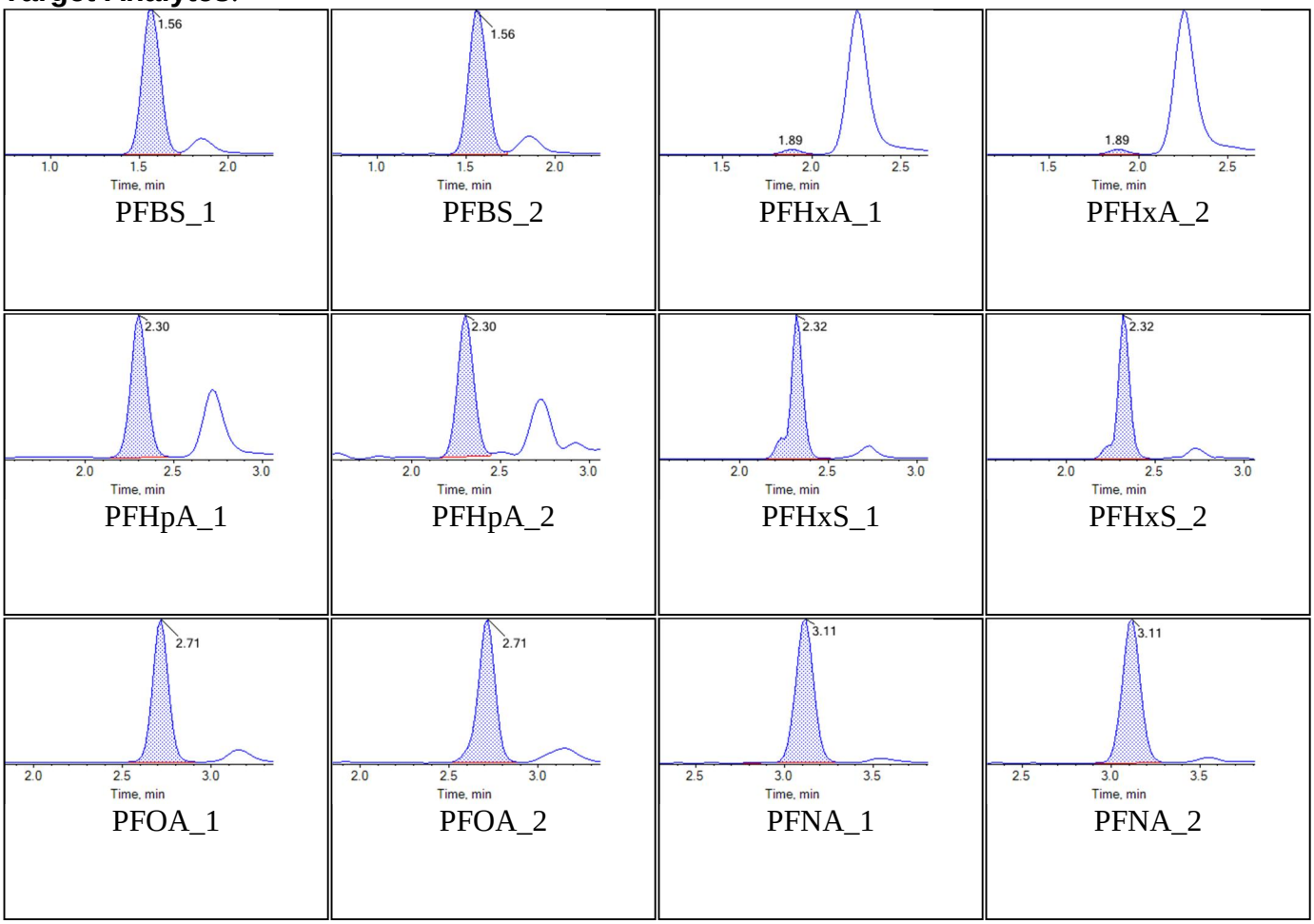
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:24 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**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

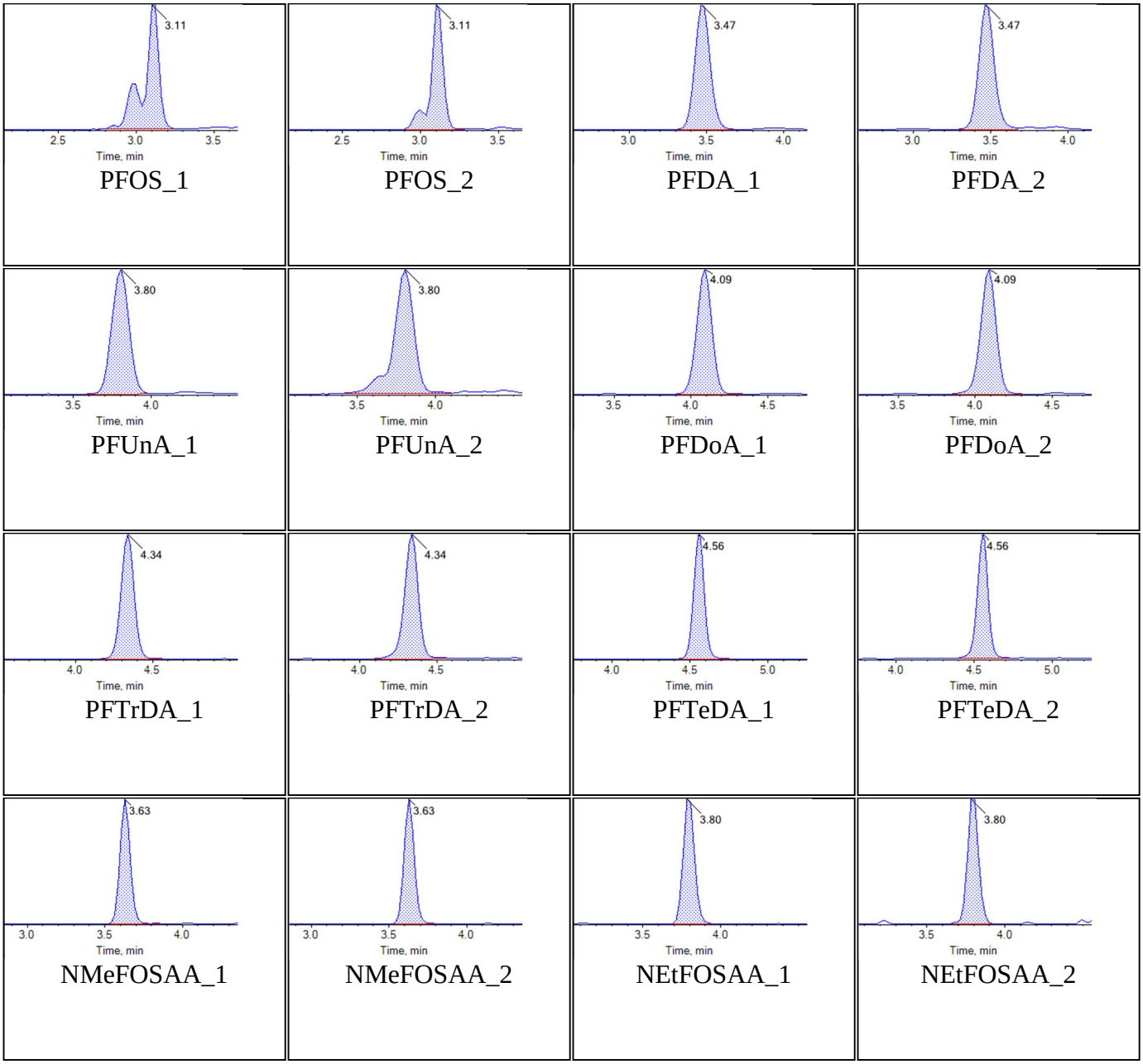
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:24 PM

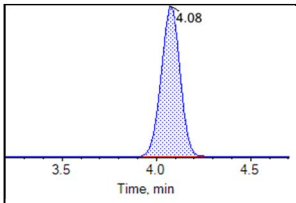


Internal Standards:

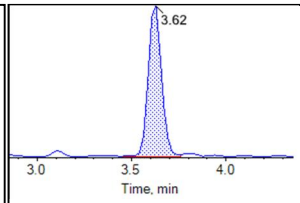
BATTELLE

Chromatogram Report

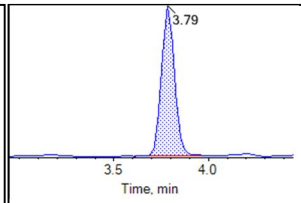
Created with Analyst Reporter
Printed: 24/10/2018 2:00:24 PM



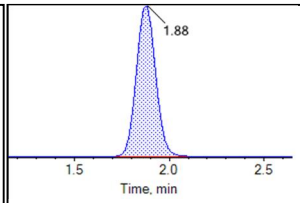
13C2-PFDoA



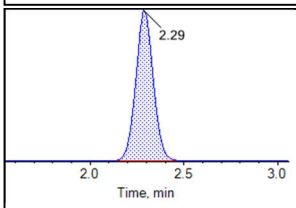
d3-MeFOSAA



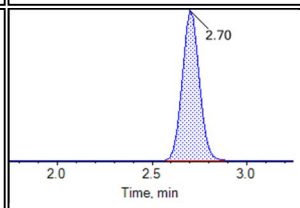
d5-EtFOSAA



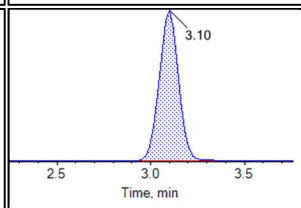
13C5-PFHxA



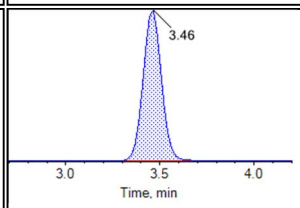
13C4-PFHpA



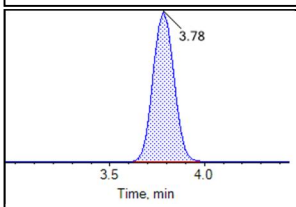
13C8-PFOA



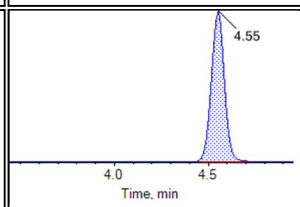
13C9-PFNA



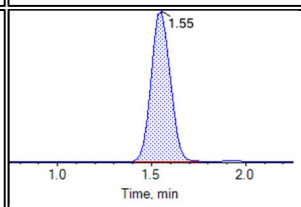
13C6-PFDA



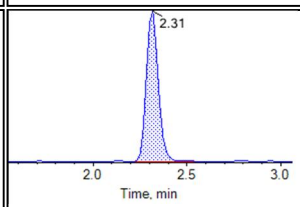
13C7-PFUnA



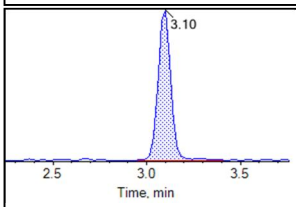
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

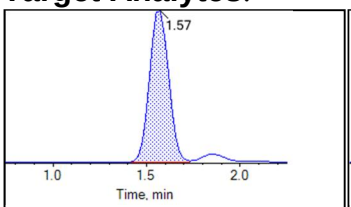
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:30 PM

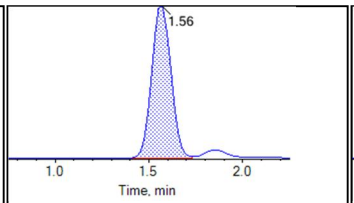
Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

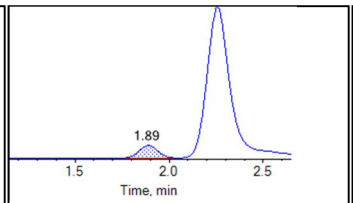
Target Analytes:



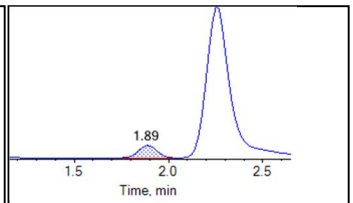
PFBS_1



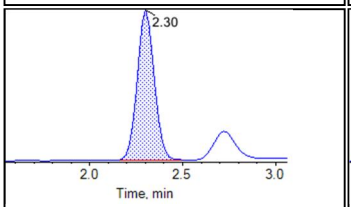
PFBS_2



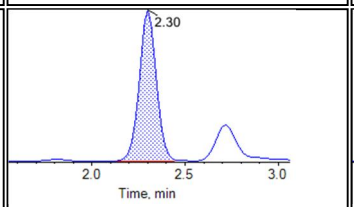
PFHxA_1



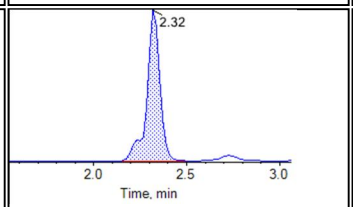
PFHxA_2



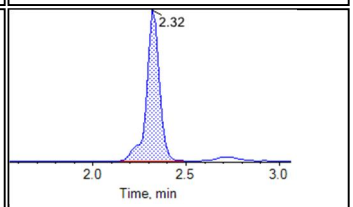
PFHpA_1



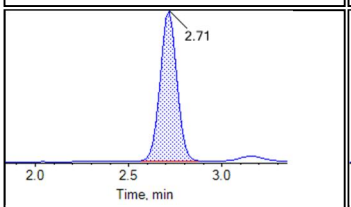
PFHpA_2



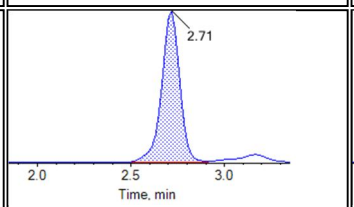
PFHxS_1



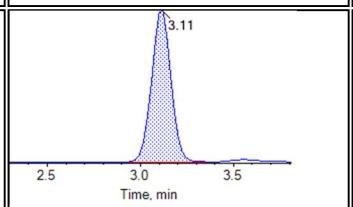
PFHxS_2



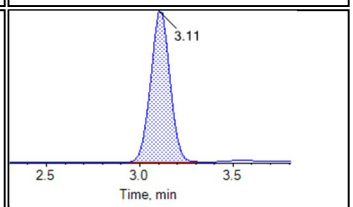
PFOA_1



PFOA_2



PFNA_1



PFNA_2

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Chromatogram Report

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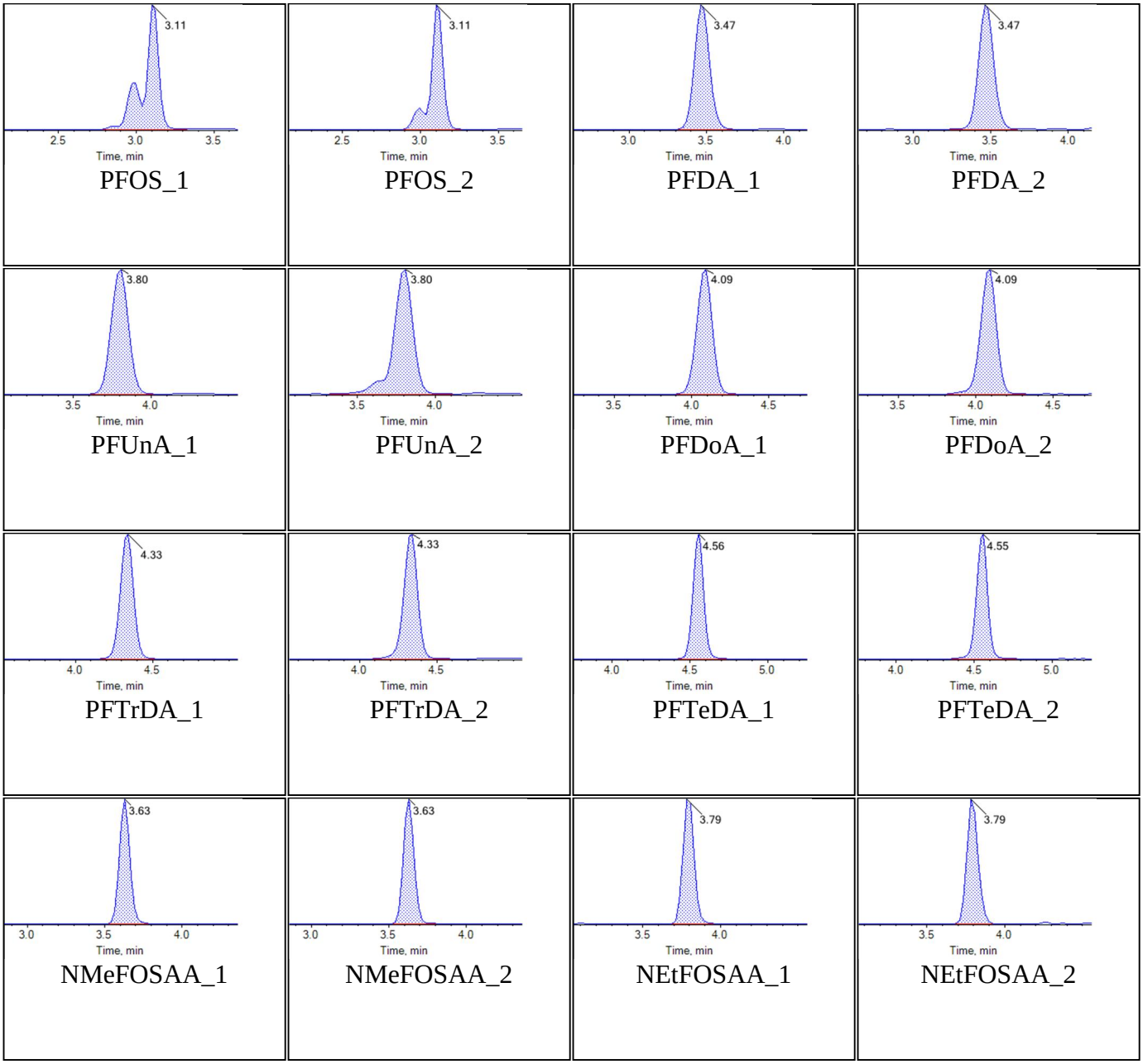
Printed: 24/10/2018 2:00:30 PM

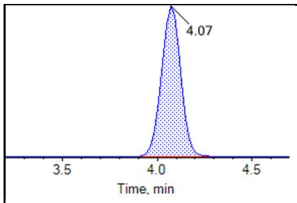


Internal Standards:

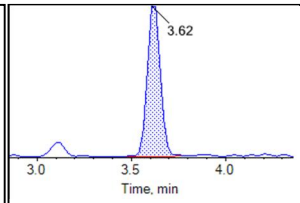
BATTELLE

Chromatogram Report

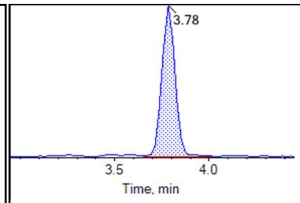
Created with Analyst Reporter
Printed: 24/10/2018 2:00:30 PM



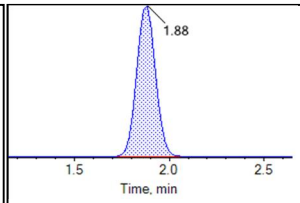
13C2-PFDoA



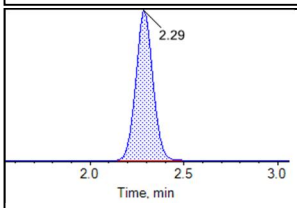
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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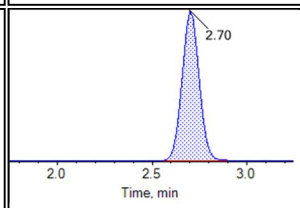
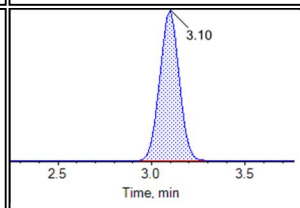
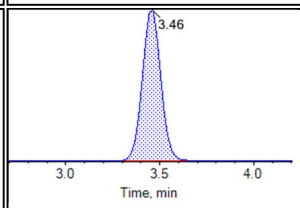


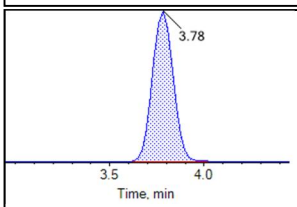
13C8-PFOA



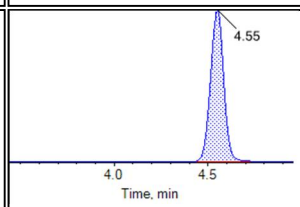
13C9-PFNA



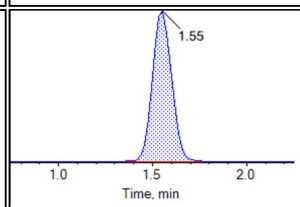
13C6-PFDA



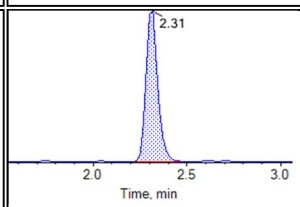
13C7-PFUnA



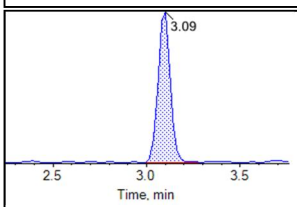
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

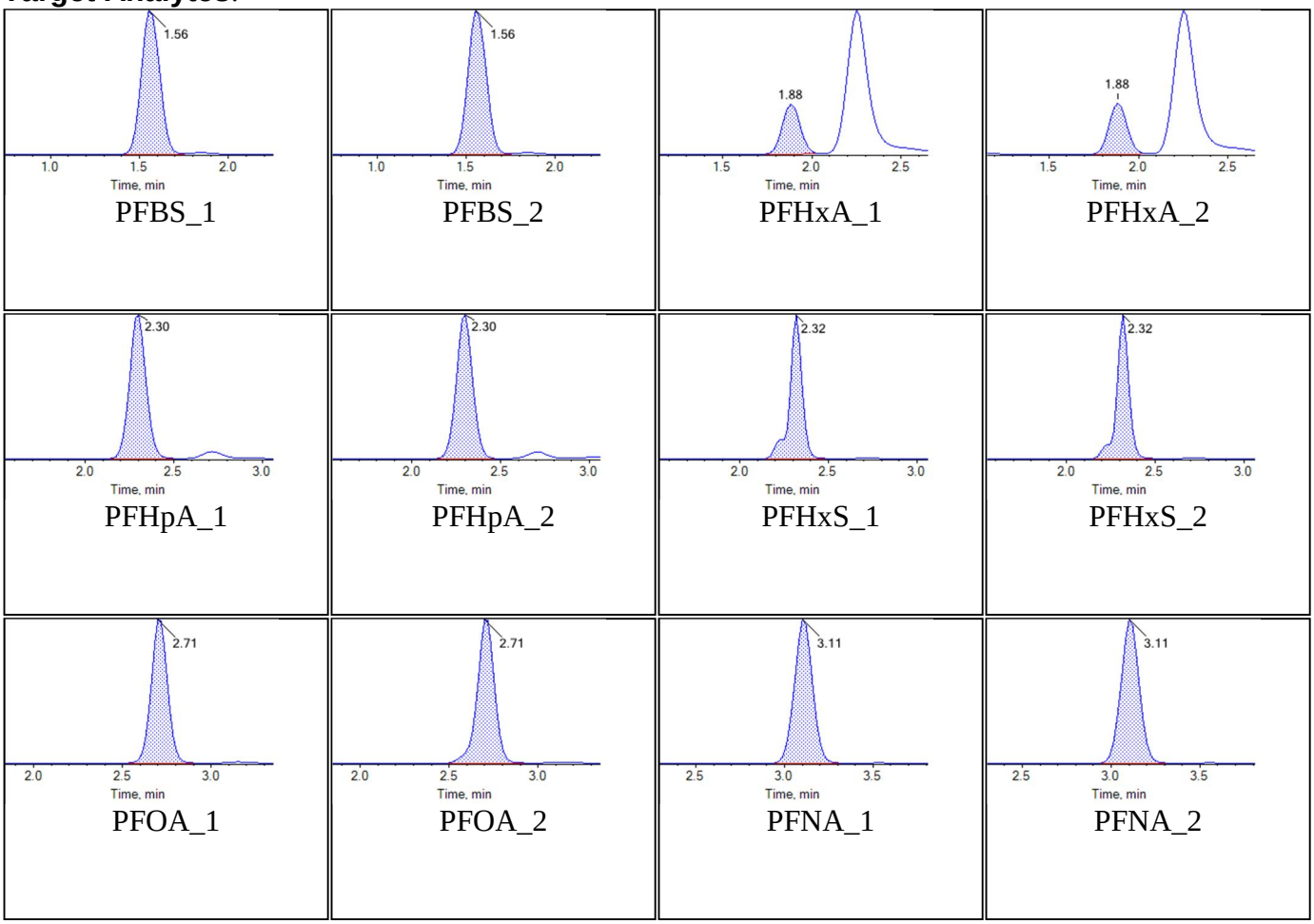
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:36 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**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

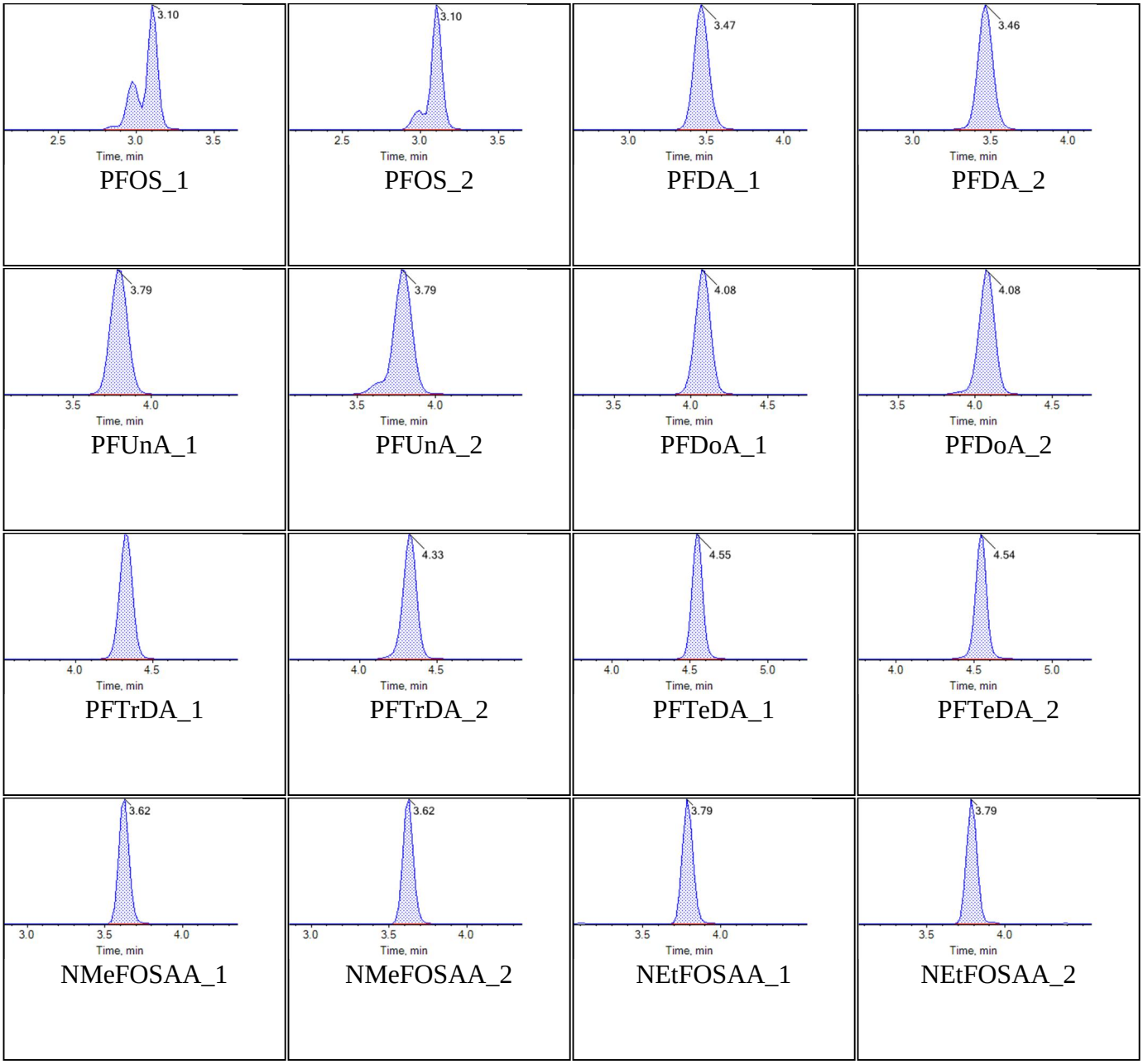
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:36 PM

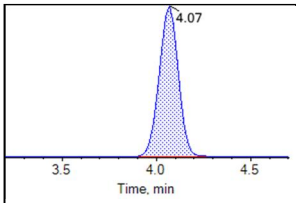


Internal Standards:

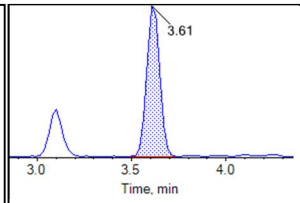
BATTELLE

Chromatogram Report

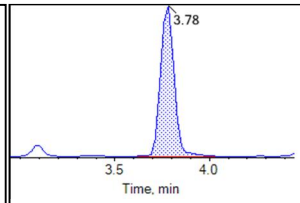
Created with Analyst Reporter
Printed: 24/10/2018 2:00:36 PM



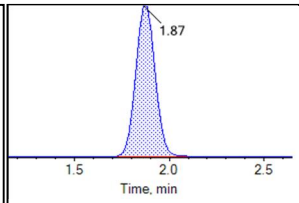
13C2-PFDoA



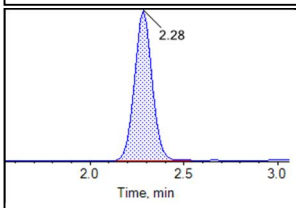
d3-MeFOSAA



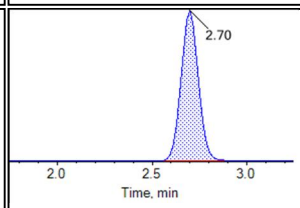
d5-EtFOSAA



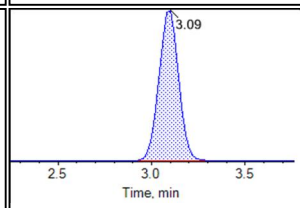
13C5-PFHxA



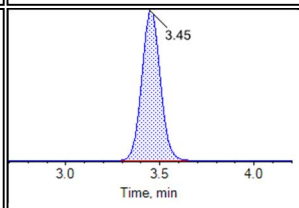
13C4-PFHpA



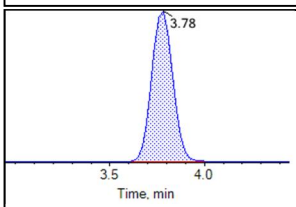
13C8-PFOA



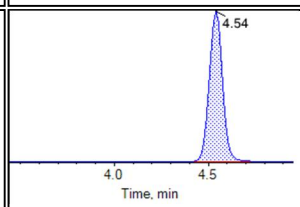
13C9-PFNA



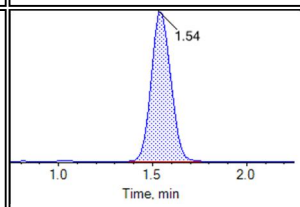
13C6-PFDA



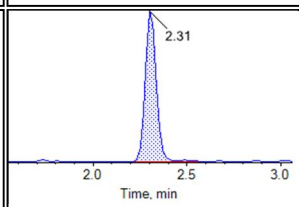
13C7-PFUnA



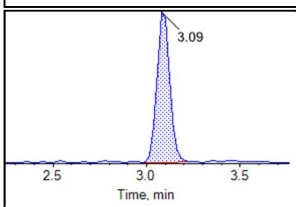
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

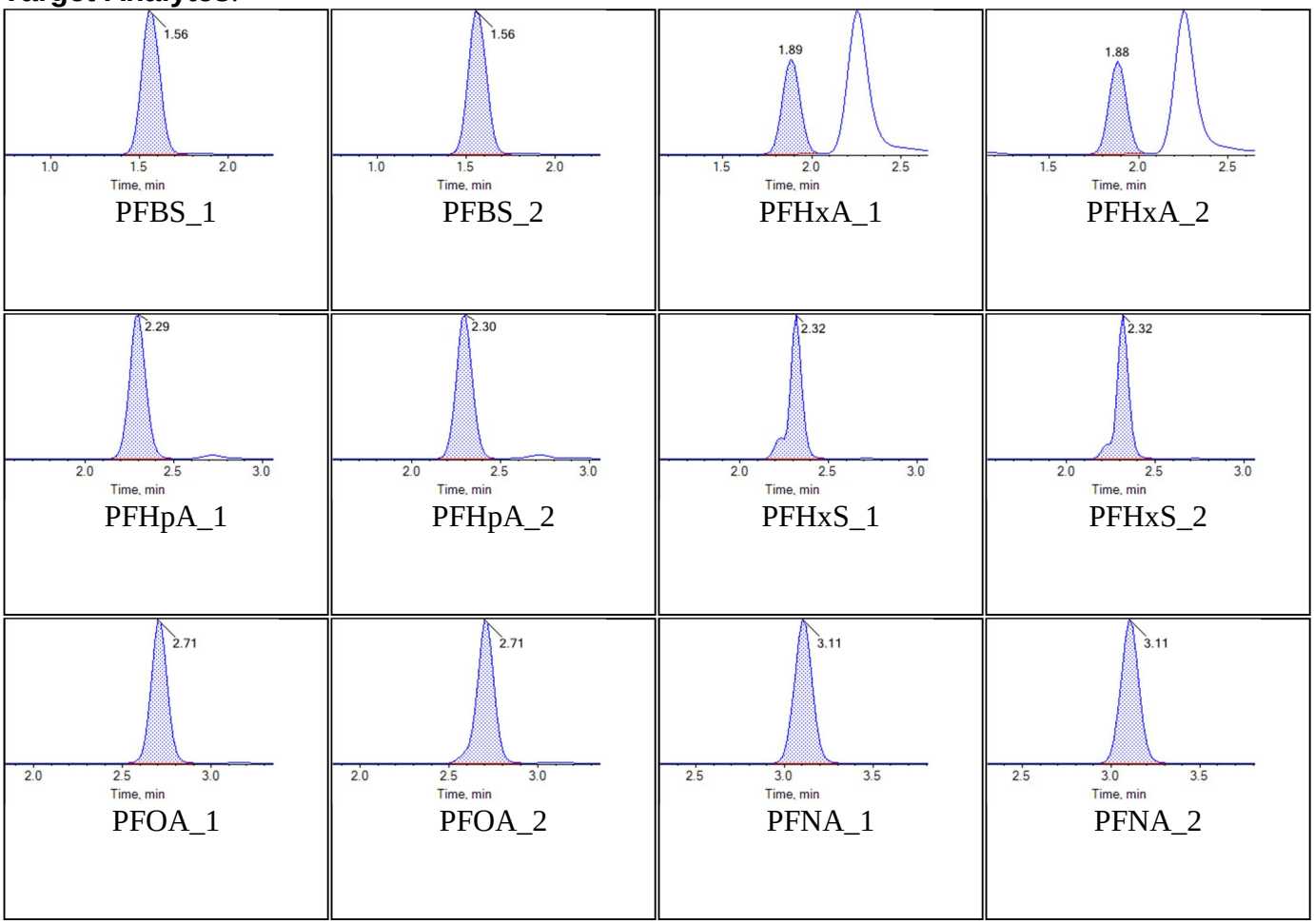
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:41 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**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

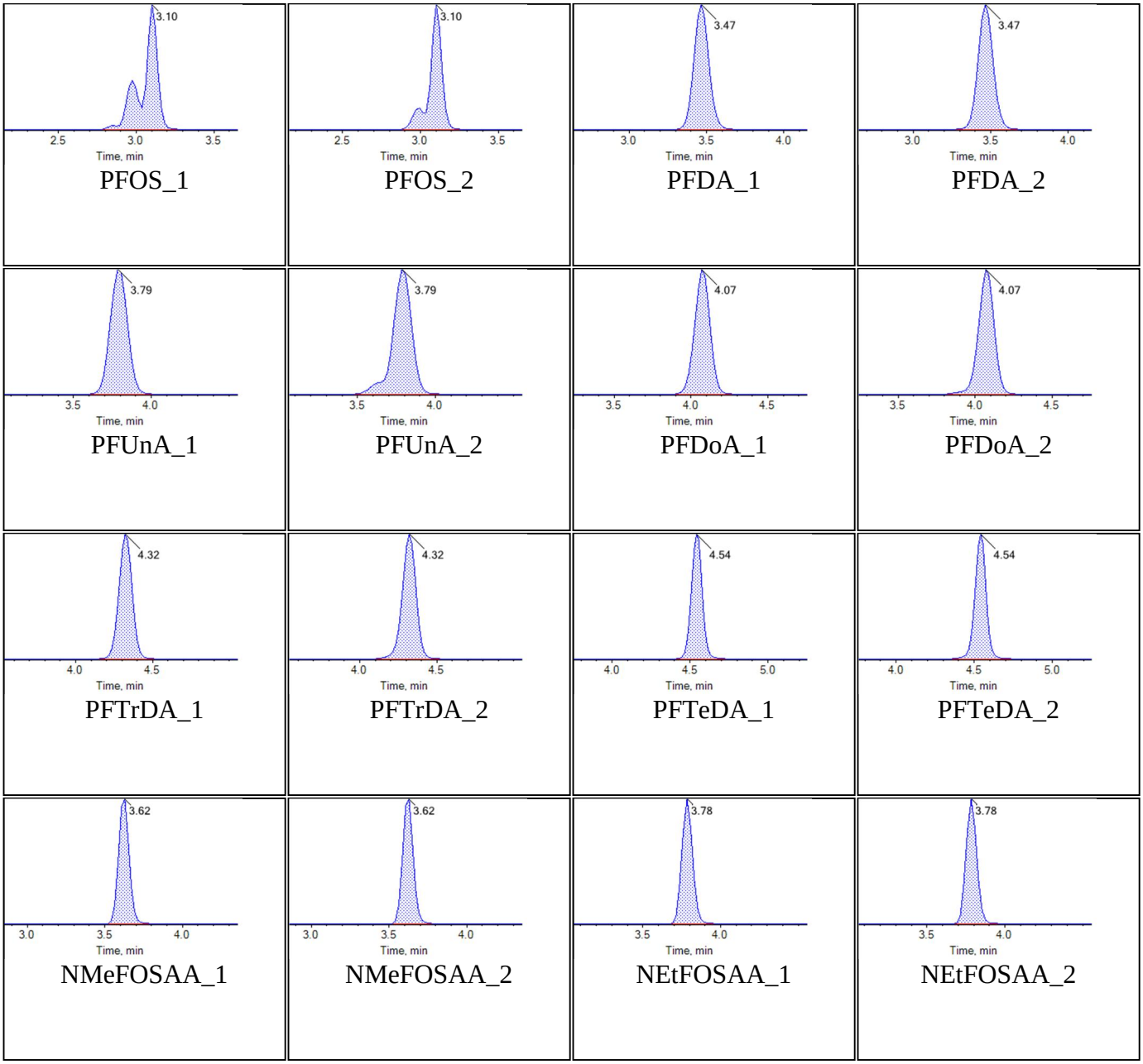
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:41 PM



Internal Standards:

BATTELLE

Chromatogram Report

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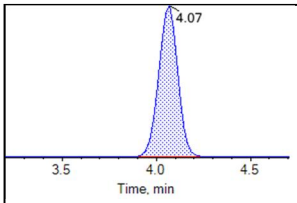
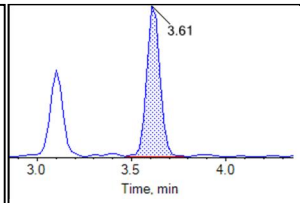
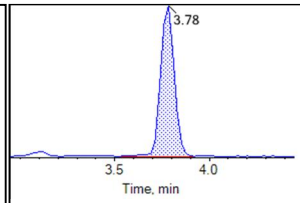


13C2-PFDoA



d3-MeFOSAA



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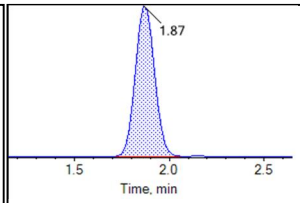
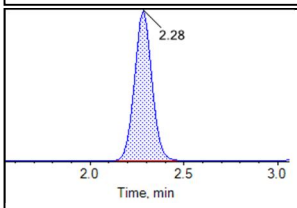
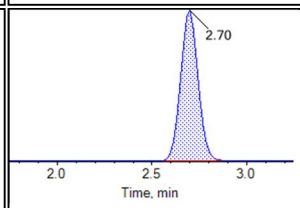


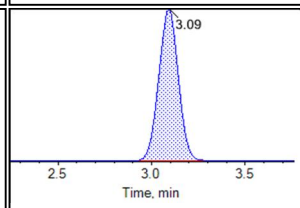
13C5-PFHxA



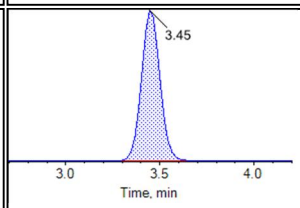
13C4-PFHpA



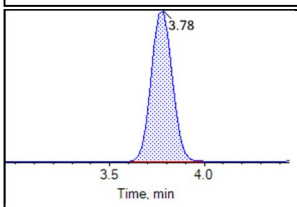
13C8-PFOA



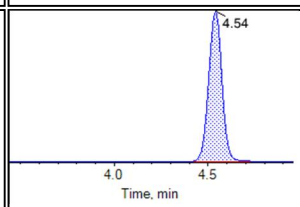
13C9-PFNA



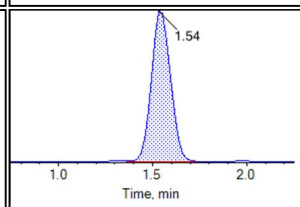
13C6-PFDA



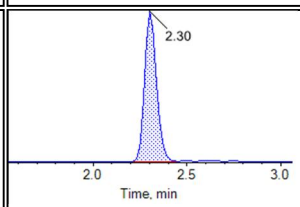
13C7-PFUnA



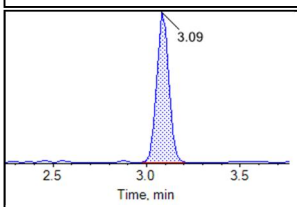
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

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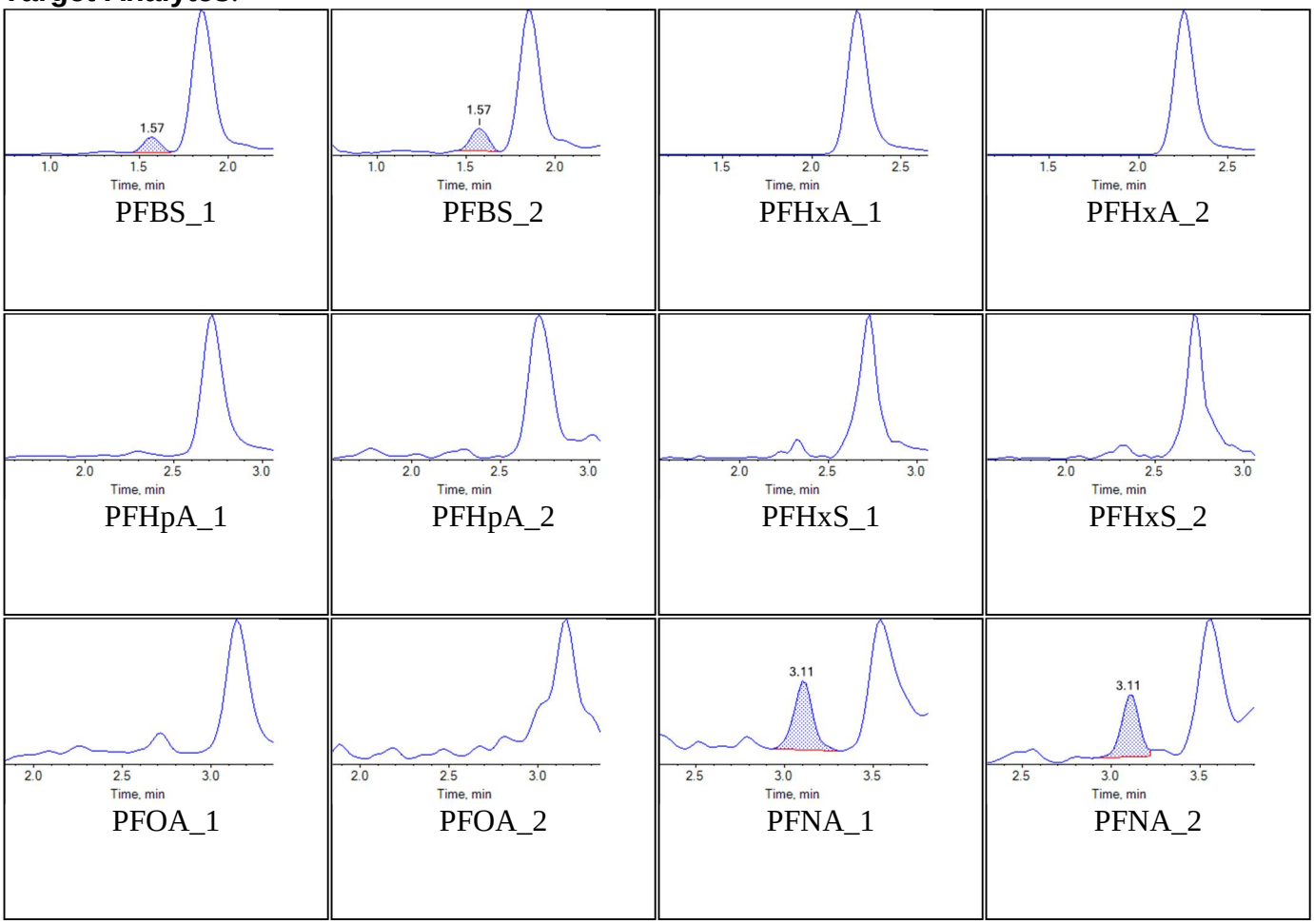
Printed: 24/10/2018 2:00:48 PM

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**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

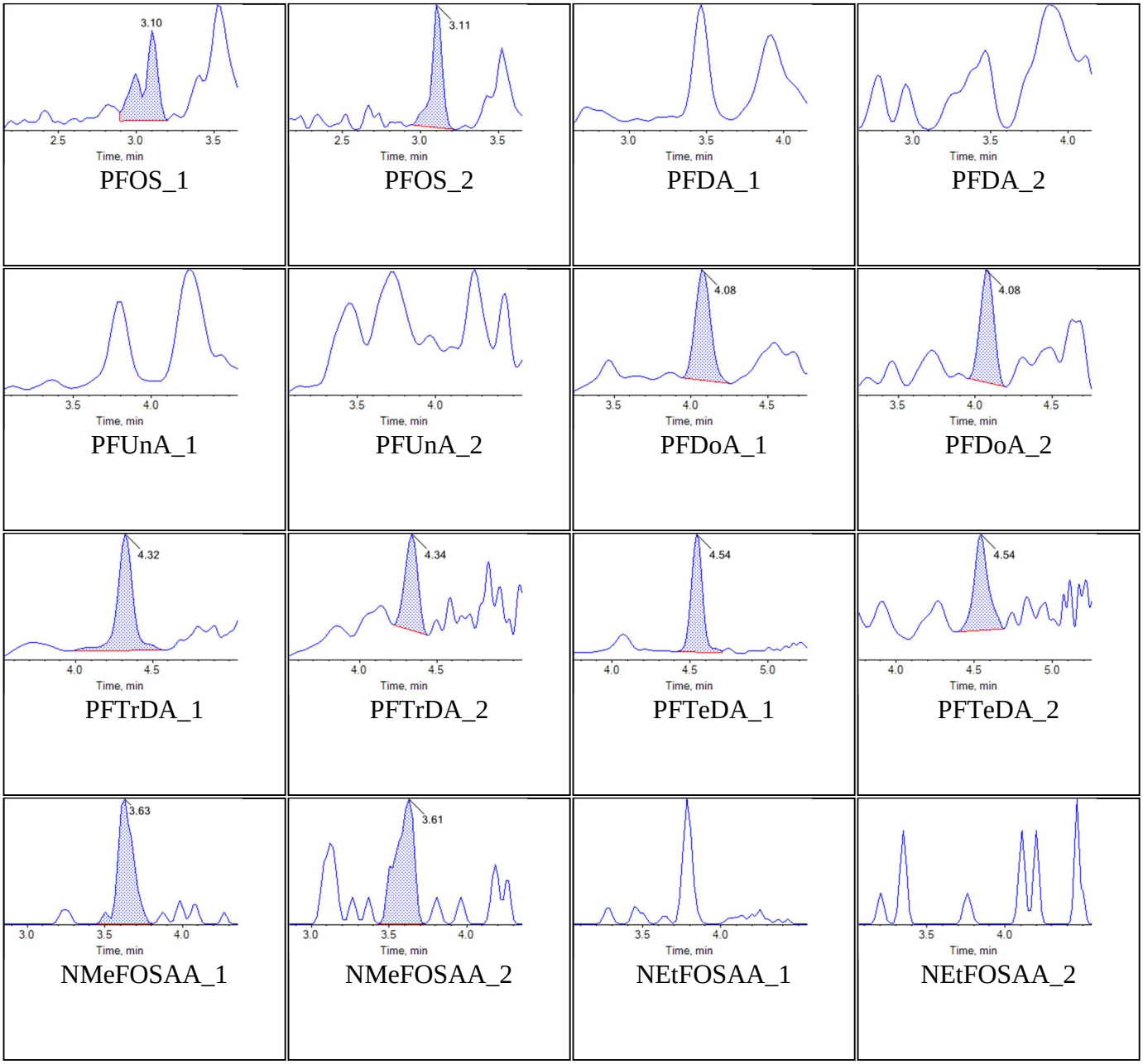
Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:48 PM

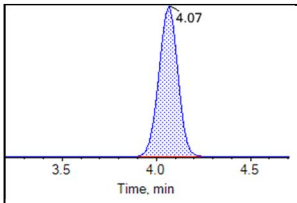


Internal Standards:

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:48 PM



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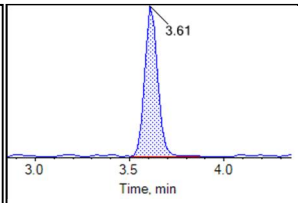
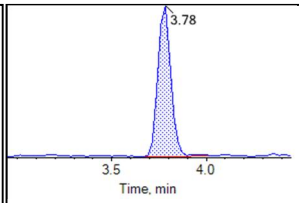


d3-MeFOSAA



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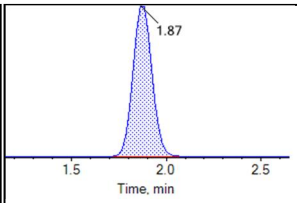

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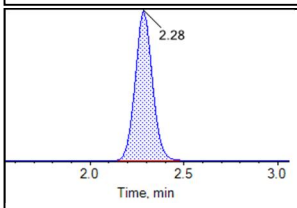

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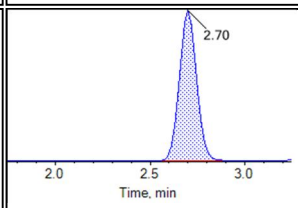

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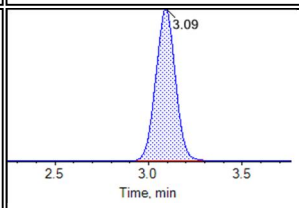
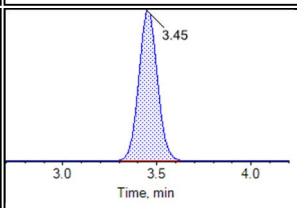
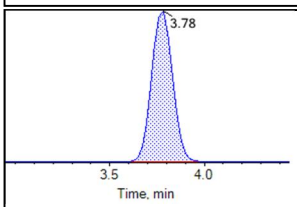


13C9-PFNA



13C6-PFDA



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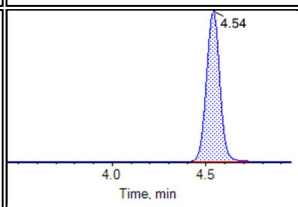
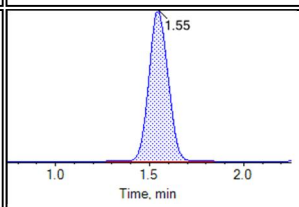
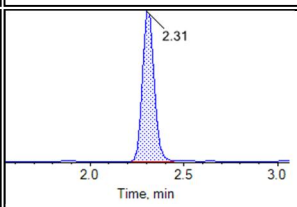


13C2-PFTeDA



13C3-PFBS



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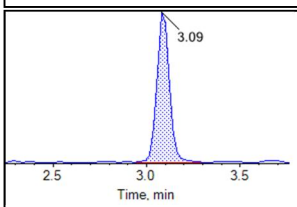


13C8-PFOS

BATTELLE

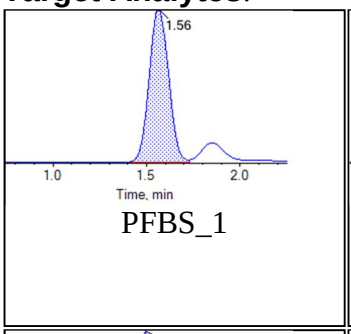
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:00:55 PM

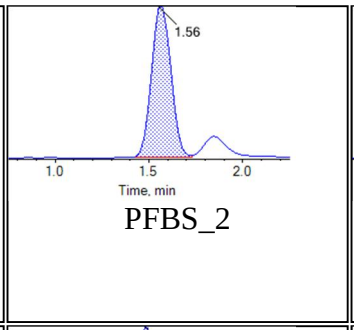
Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:13:49	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

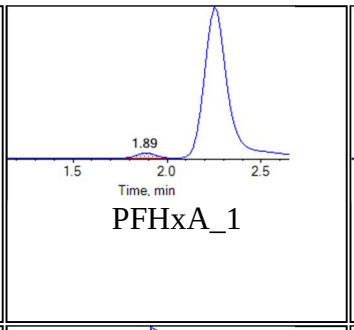
Target Analytes:



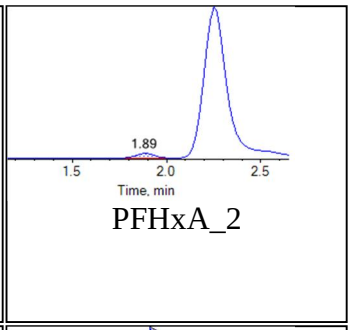
PFBS_1



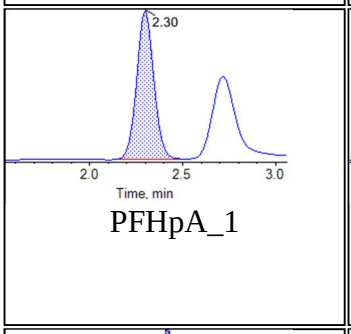
PFBS_2



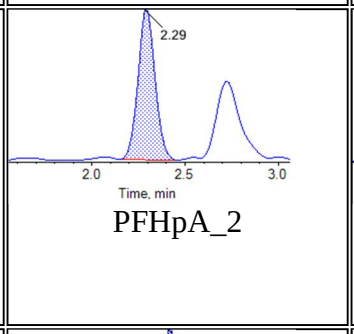
PFHxA_1



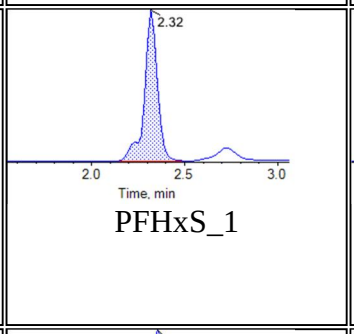
PFHxA_2



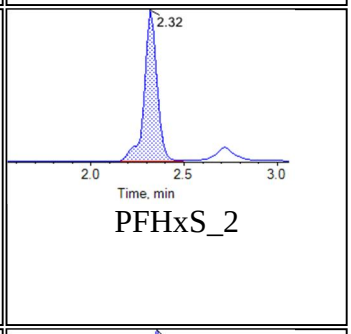
PFHpA_1



PFHpA_2



PFHxS_1



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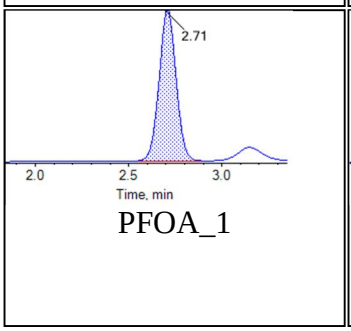

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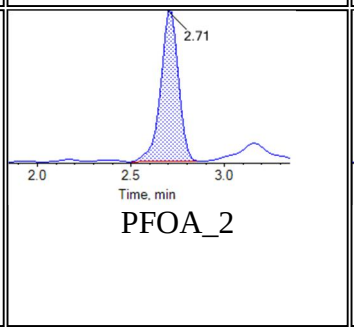
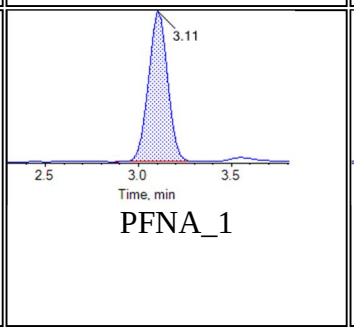


PFOA_2



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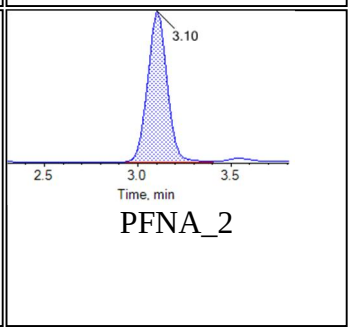

PFNA_2

BATTELLE

Chromatogram Report

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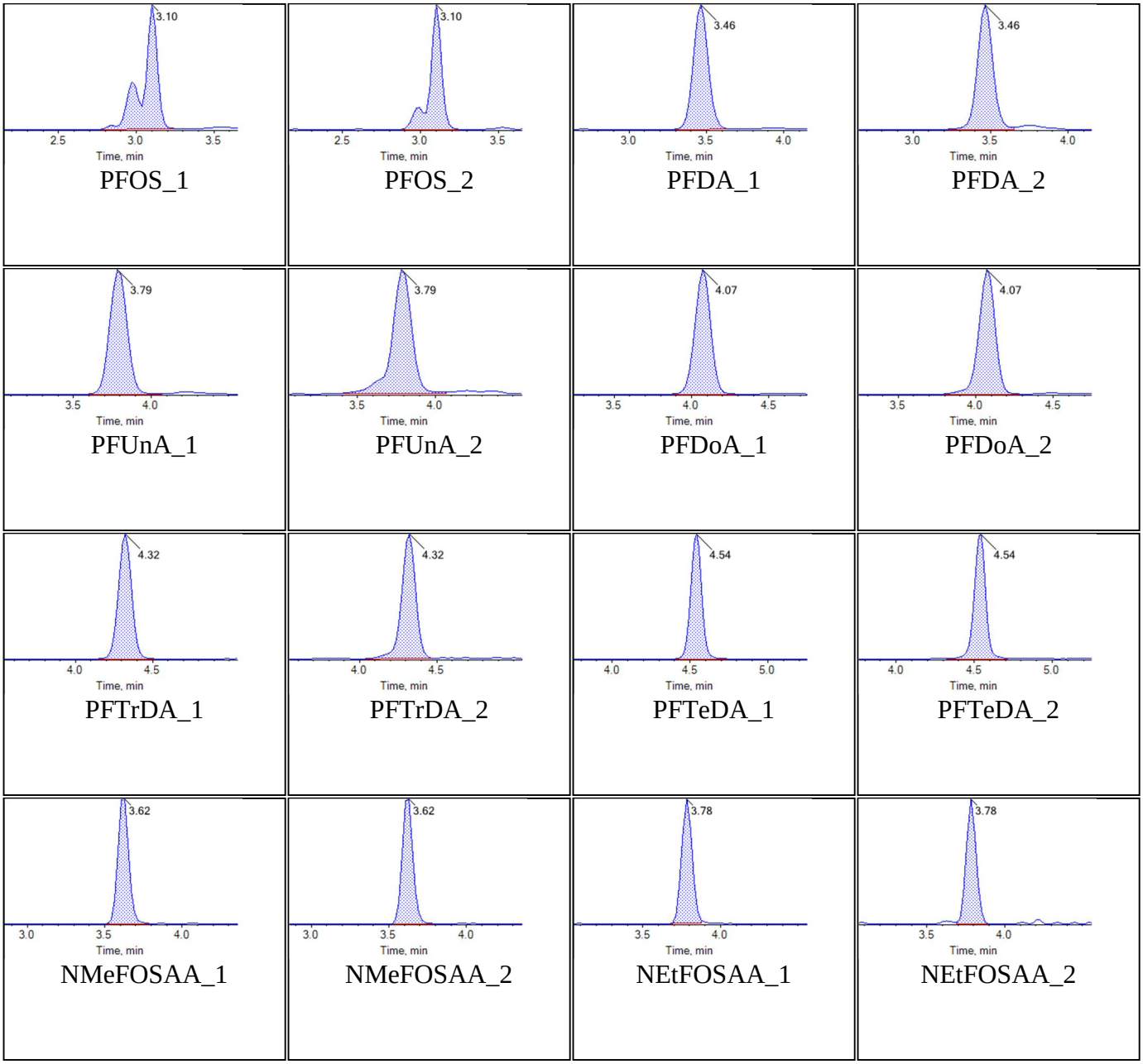

Internal Standards:

BATTELLE

Chromatogram Report

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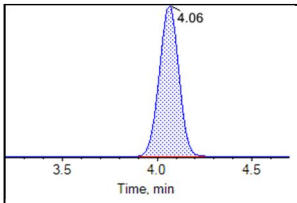
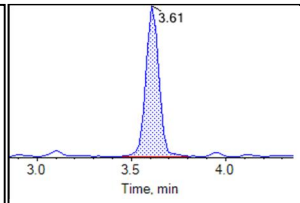
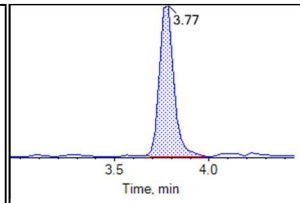


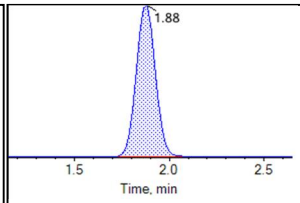
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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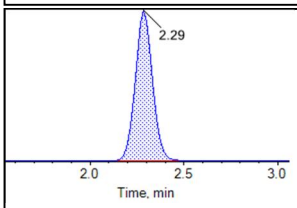
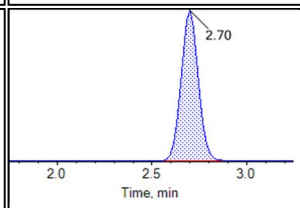


13C4-PFHpA



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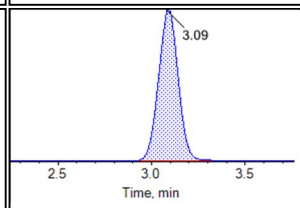
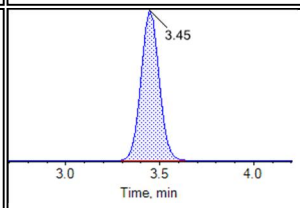
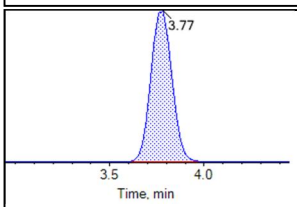


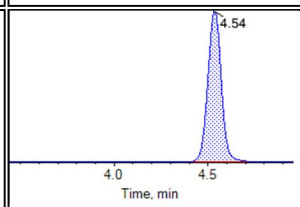
13C9-PFNA



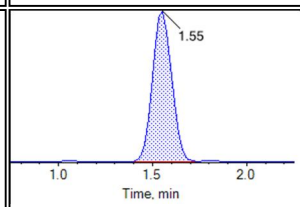
13C6-PFDA



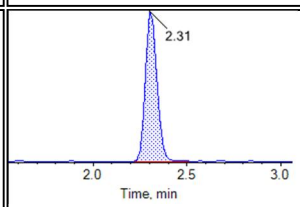
13C7-PFUnA



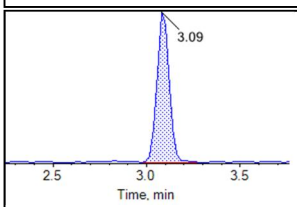
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

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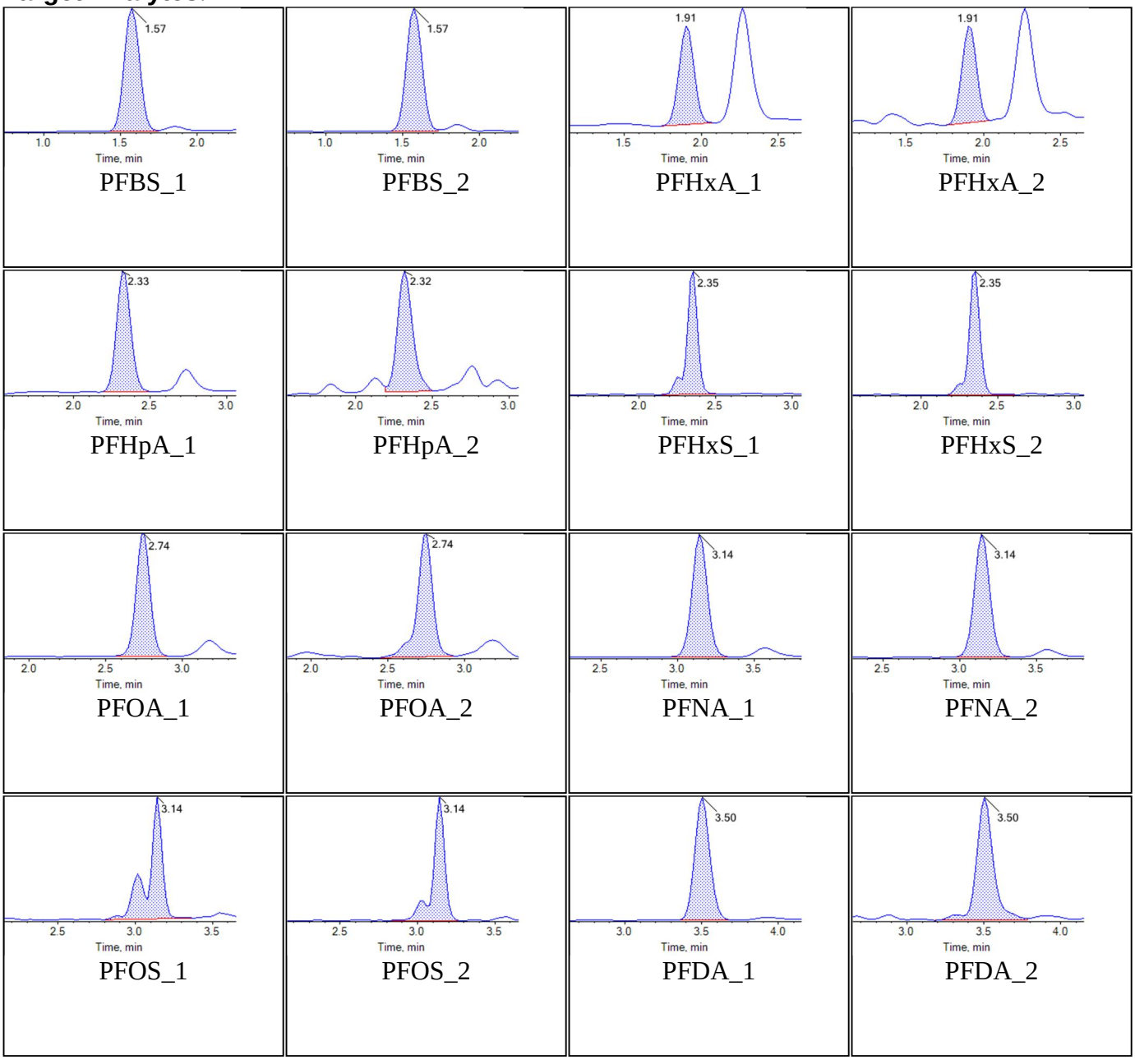
Printed: 24/10/2018 2:01:11 PM

Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

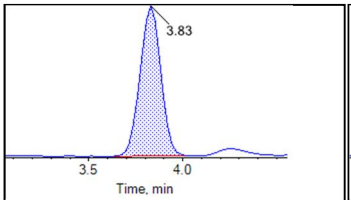
Target Analytes:



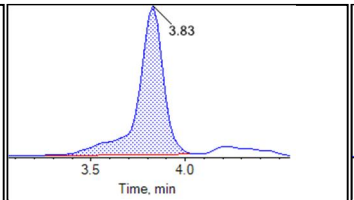
BATTELLE

Chromatogram Report

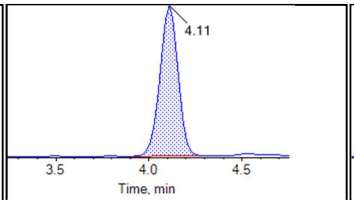
Created with Analyst Reporter
Printed: 24/10/2018 2:01:11 PM



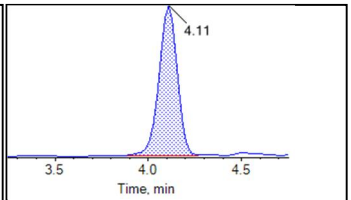
PFUnA_1



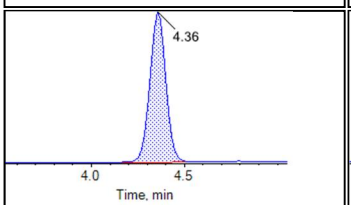
PFUnA_2



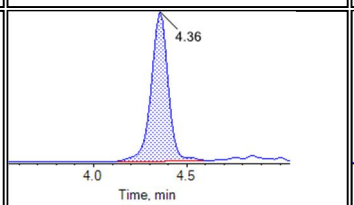
PFDoA_1



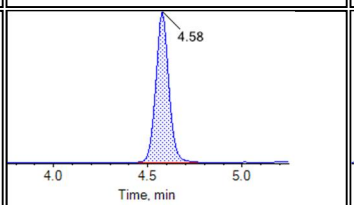
PFDoA_2



PFTrDA_1



PFTrDA_2



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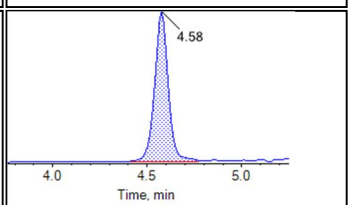

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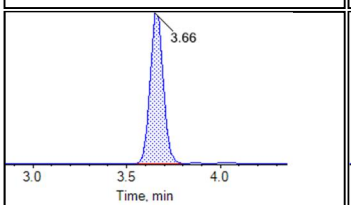
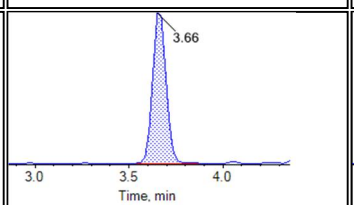
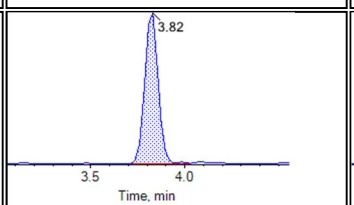


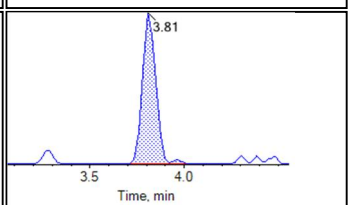
NMeFOSAA_1



NMeFOSAA_2

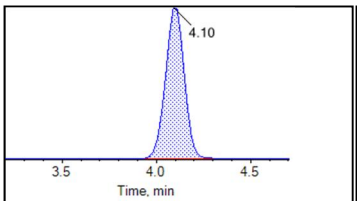


NEtFOSAA_1

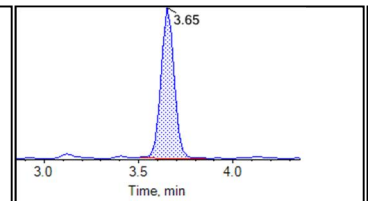


NEtFOSAA_2

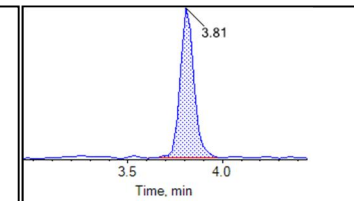
Internal Standards:



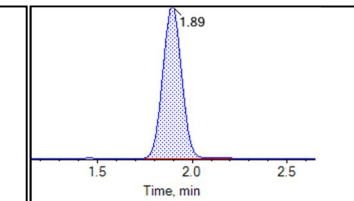
13C2-PFDoA



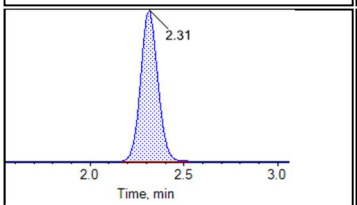
d3-MeFOSAA



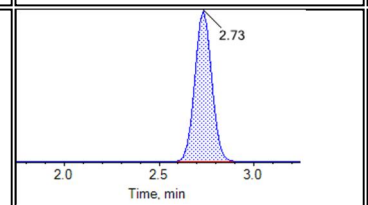
d5-EtFOSAA



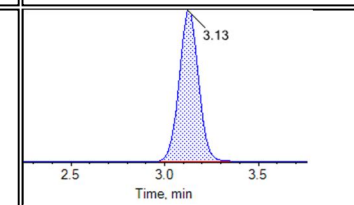
13C5-PFHxA



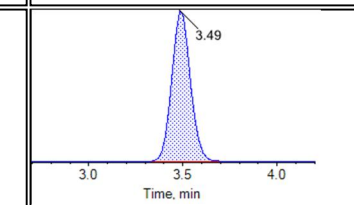
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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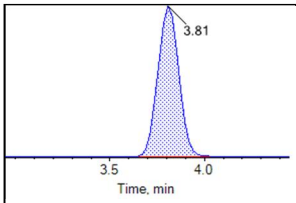
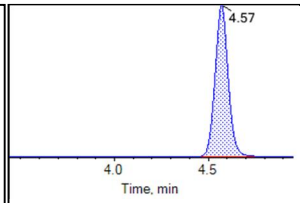
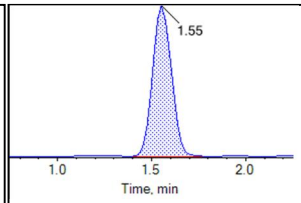


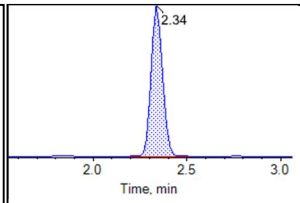
13C7-PFUnA



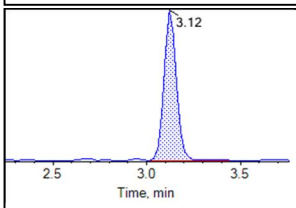
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

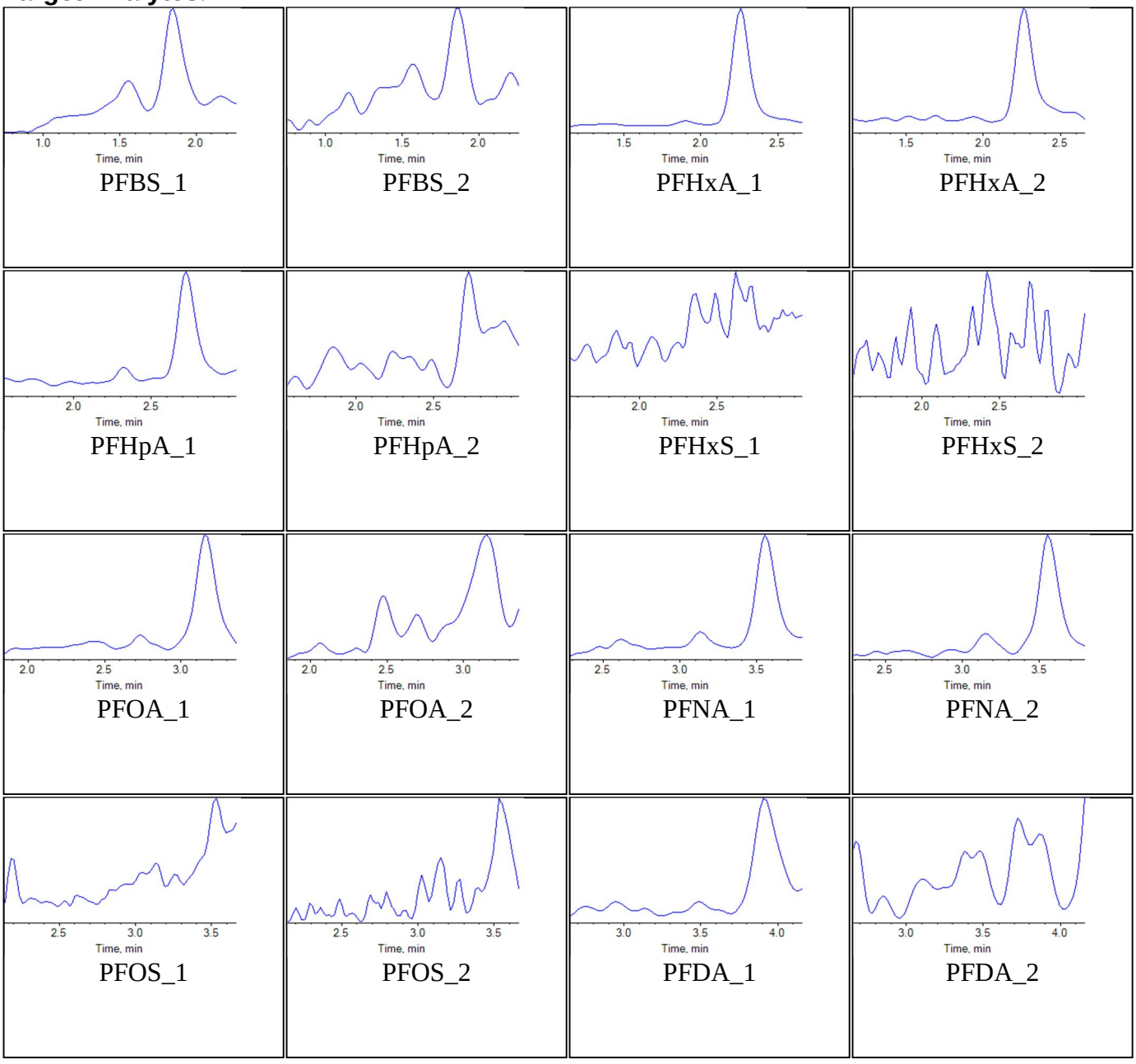
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:01:17 PM

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:27:43	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

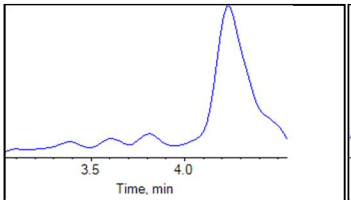
Target Analytes:



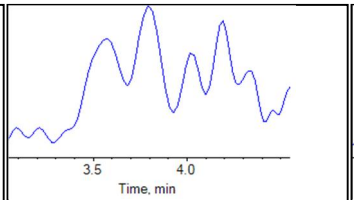
BATTELLE

Chromatogram Report

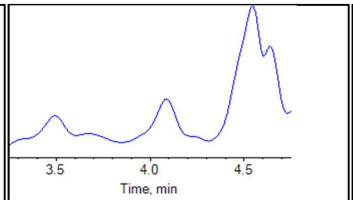
Created with Analyst Reporter
Printed: 24/10/2018 2:01:17 PM



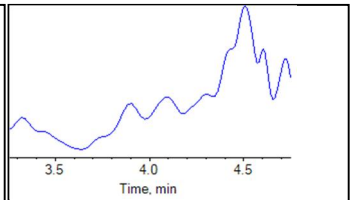
PFUnA_1



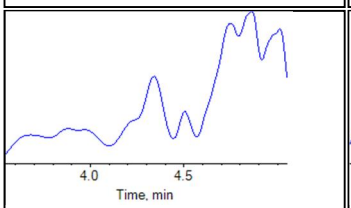
PFUnA_2



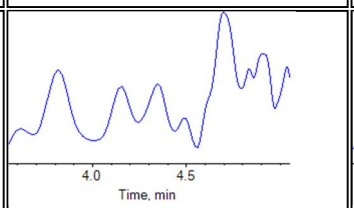
PFDoA_1



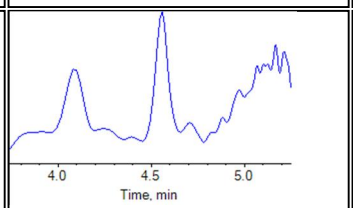
PFDoA_2



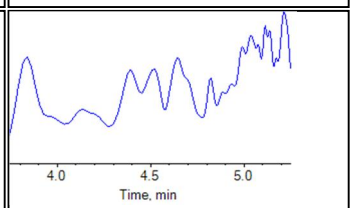
PFTrDA_1



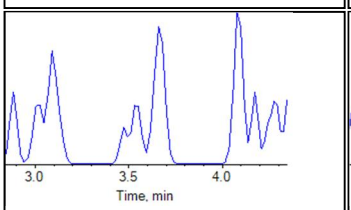
PFTrDA_2



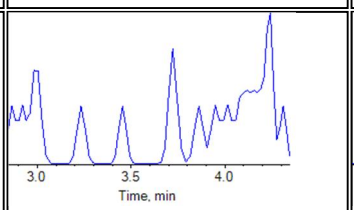
PFTeDA_1



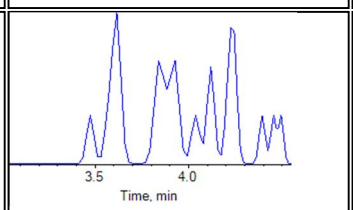
PFTeDA_2



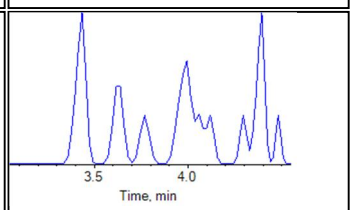
NMeFOSAA_1



NMeFOSAA_2

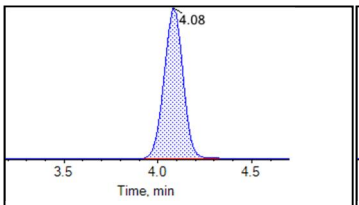


NEtFOSAA_1

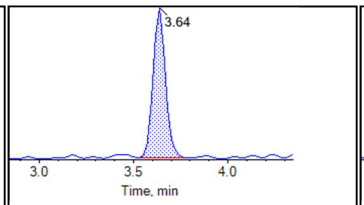


NEtFOSAA_2

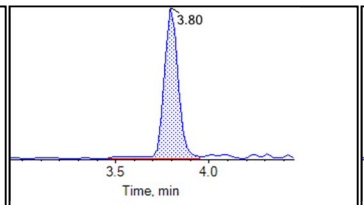
Internal Standards:



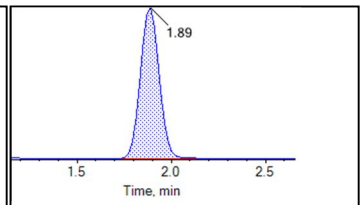
13C2-PFDoA



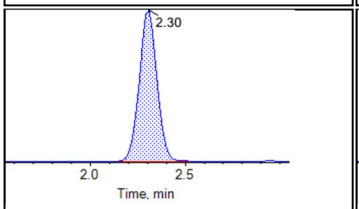
d3-MeFOSAA



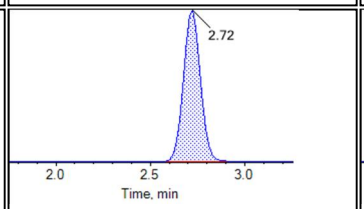
d5-EtFOSAA



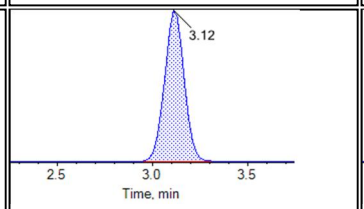
13C5-PFHxA



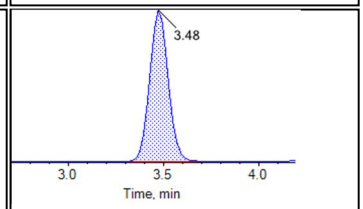
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

BATTELLE

Chromatogram Report

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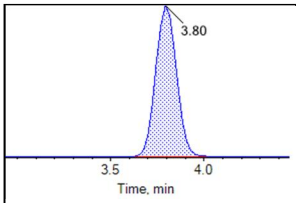
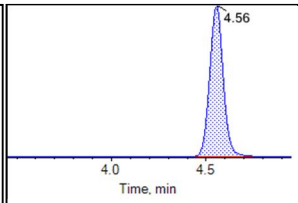
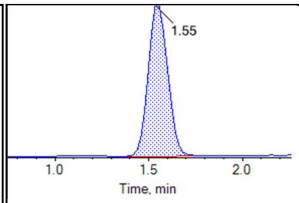


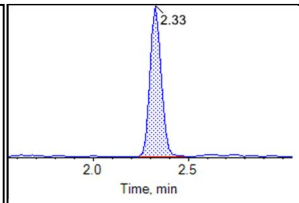
13C7-PFUnA



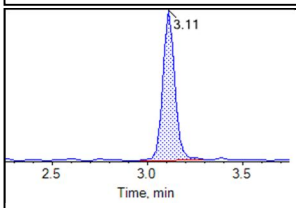
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

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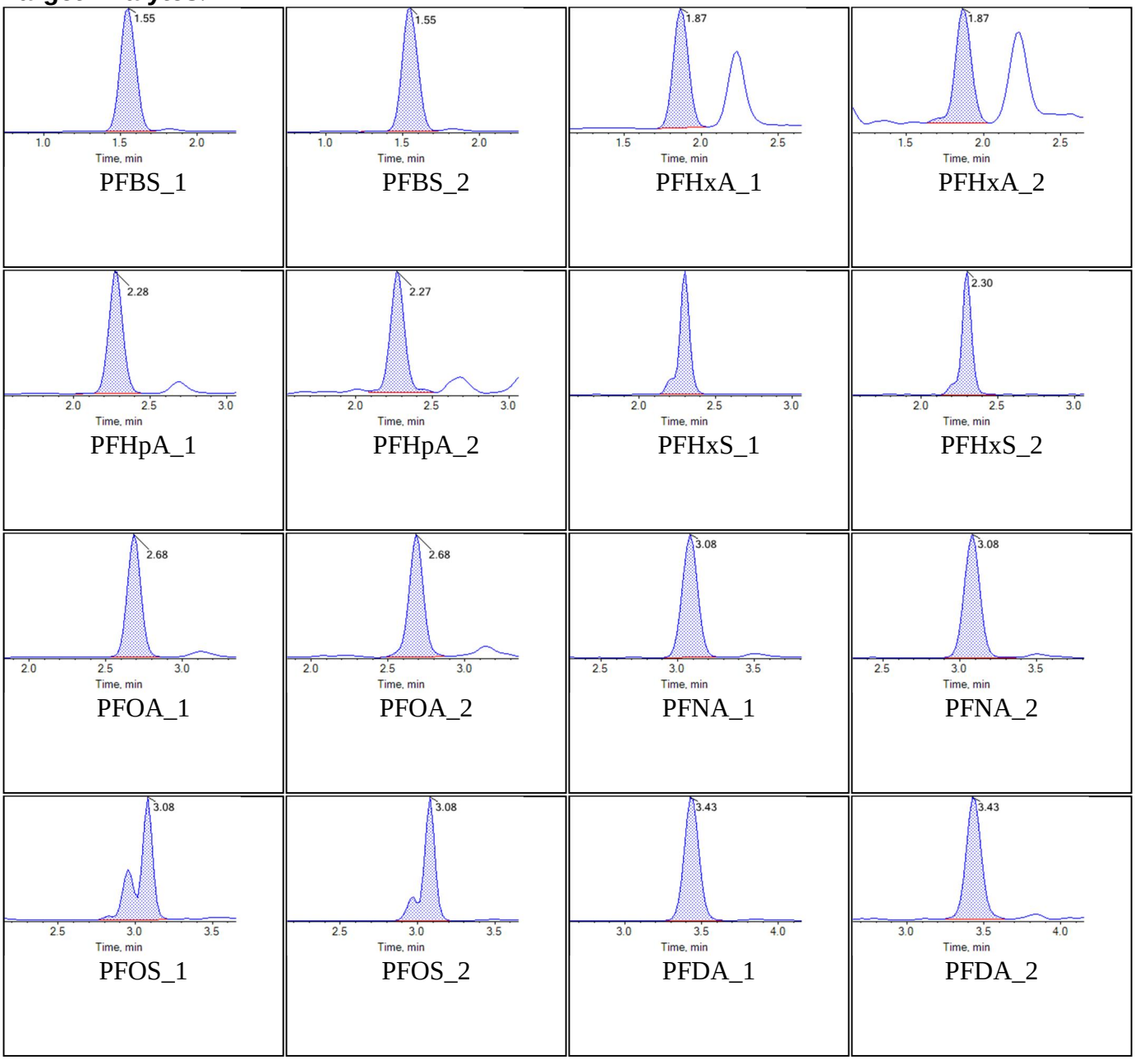
Printed: 24/10/2018 2:01:27 PM

Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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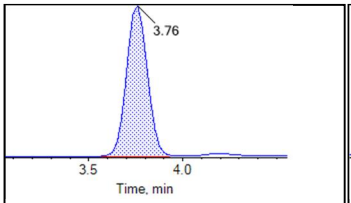
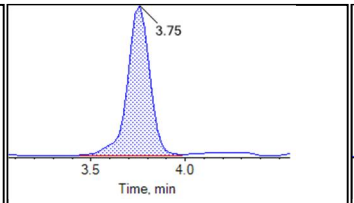
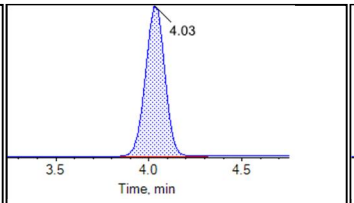


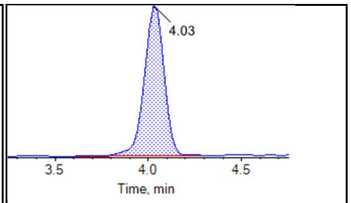
PFUnA_1



PFUnA_2



PFDoA_1



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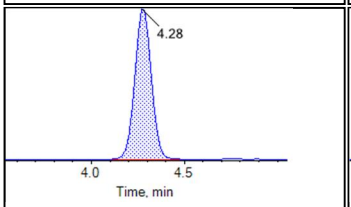
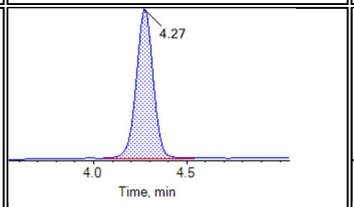
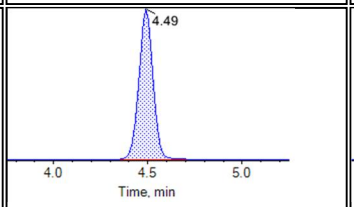


PFTrDA_1



PFTrDA_2



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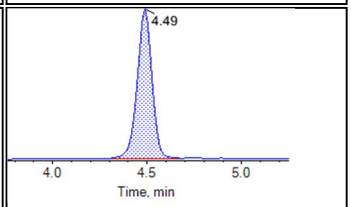

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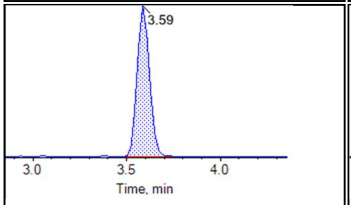
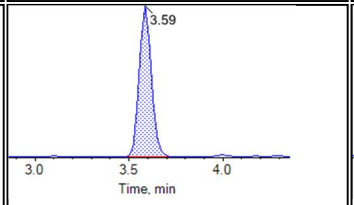
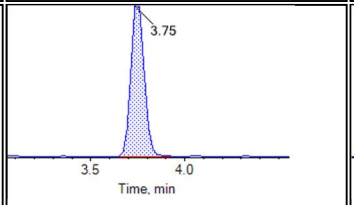


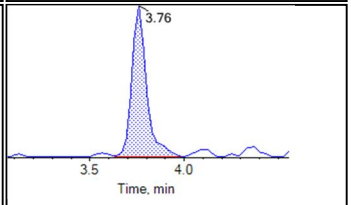
NMeFOSAA_1



NMeFOSAA_2

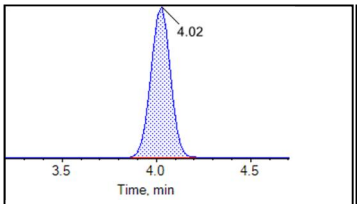


NEtFOSAA_1

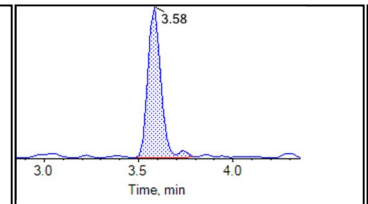


NEtFOSAA_2

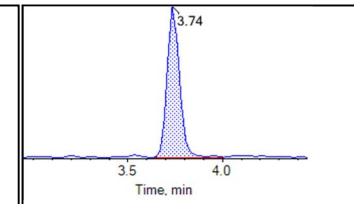
Internal Standards:



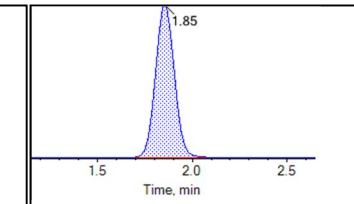
13C2-PFDoA



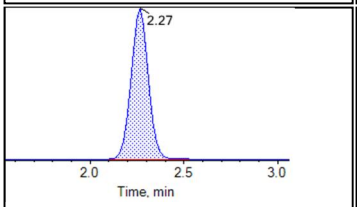
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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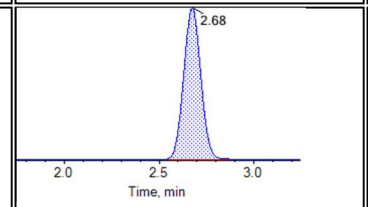
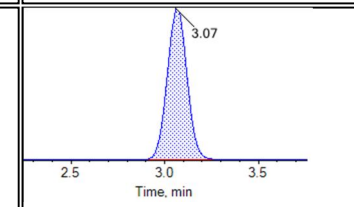
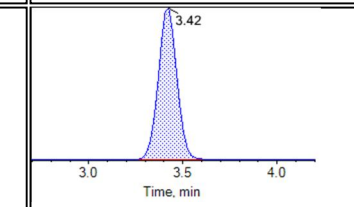


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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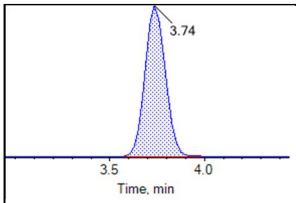
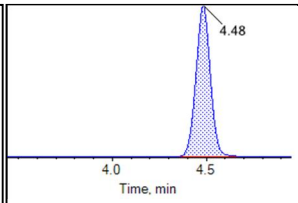
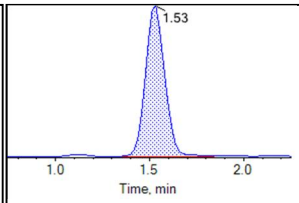


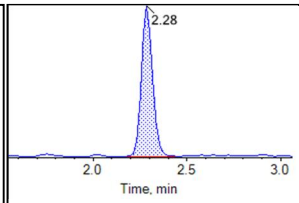
13C7-PFUnA



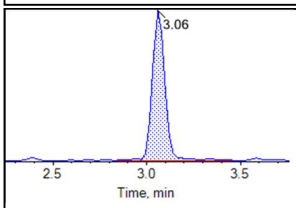
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

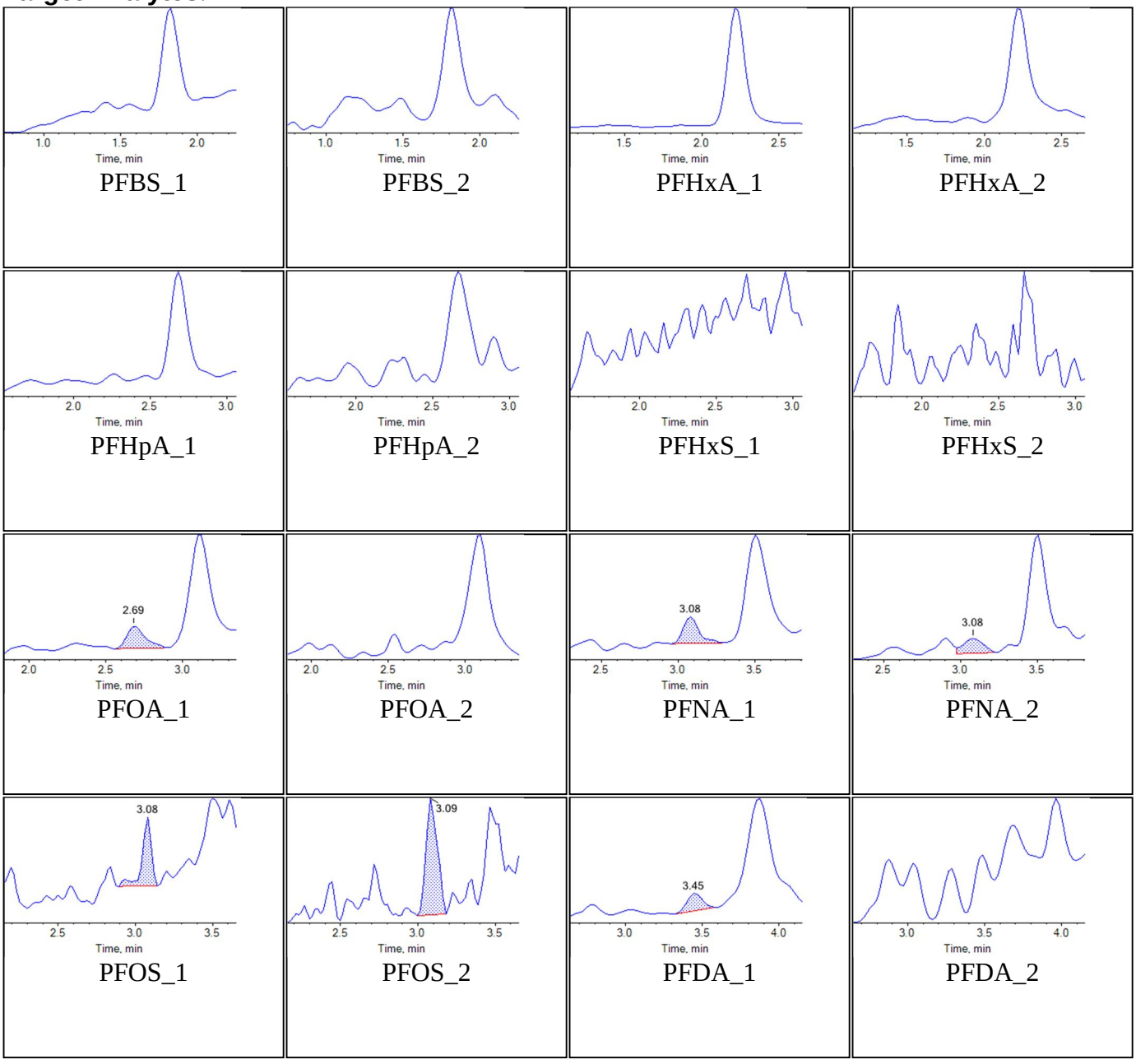
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:01:38 PM

Sample Name	CR988PB-FS(3)	**Injection Vial**	31
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:15:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

Created with Analyst Reporter
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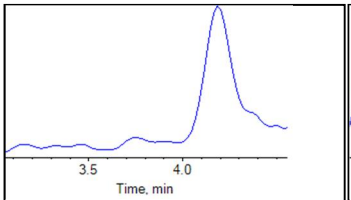
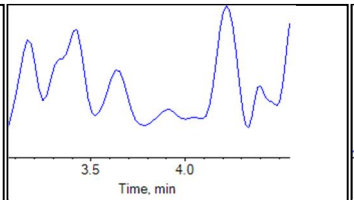
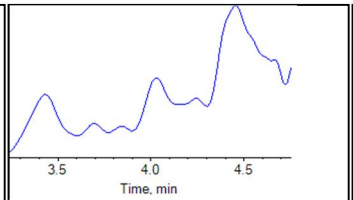


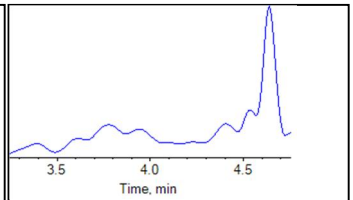
PFUnA_1



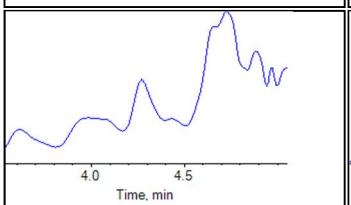
PFUnA_2



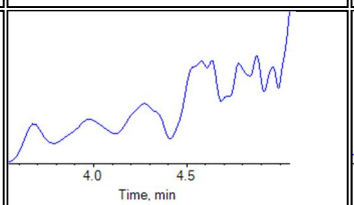
PFDoA_1



PFDoA_2



PFTrDA_1



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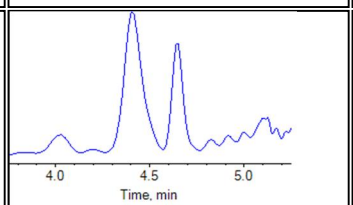

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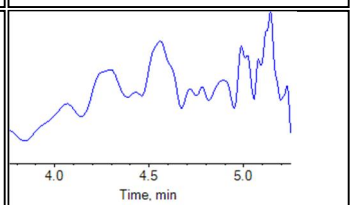
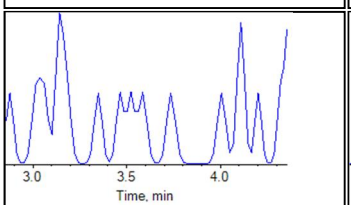
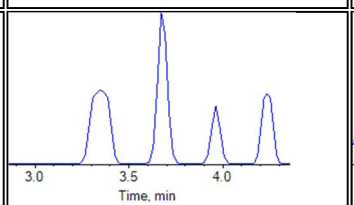


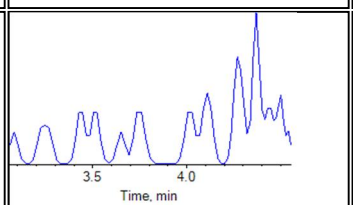
PFTeDA_2



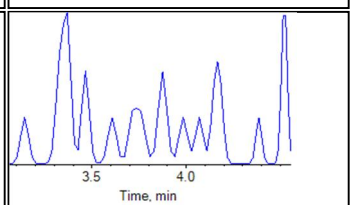
NMeFOSAA_1



NMeFOSAA_2

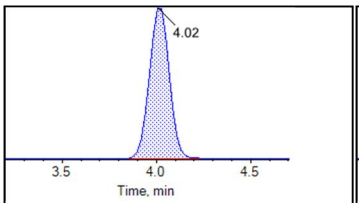


NEtFOSAA_1

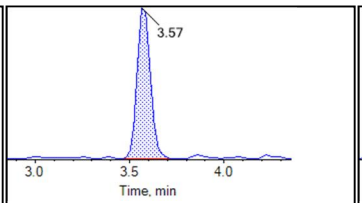


NEtFOSAA_2

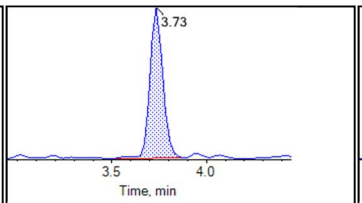
Internal Standards:



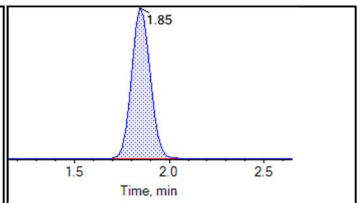
13C2-PFDoA



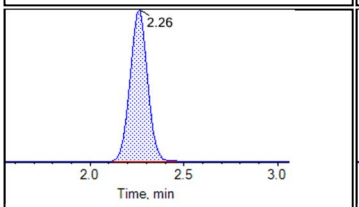
d3-MeFOSAA



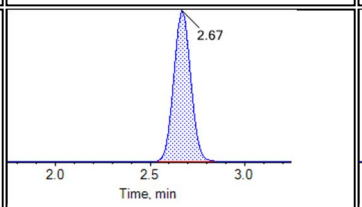
d5-EtFOSAA



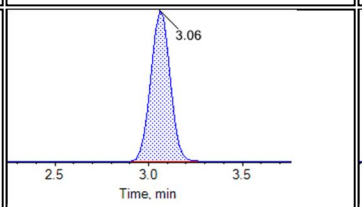
13C5-PFHxA



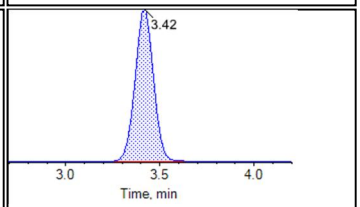
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

BATTELLE

Chromatogram Report

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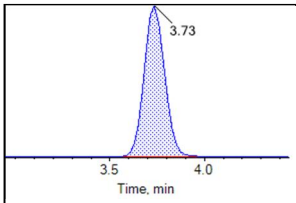
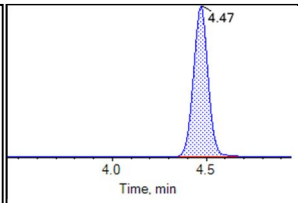
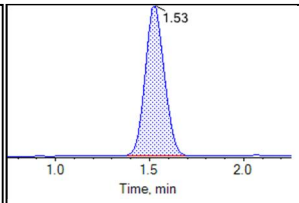


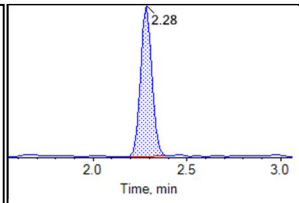
13C7-PFUnA



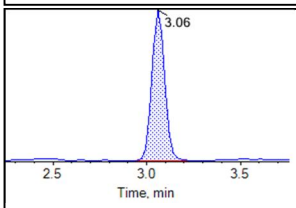
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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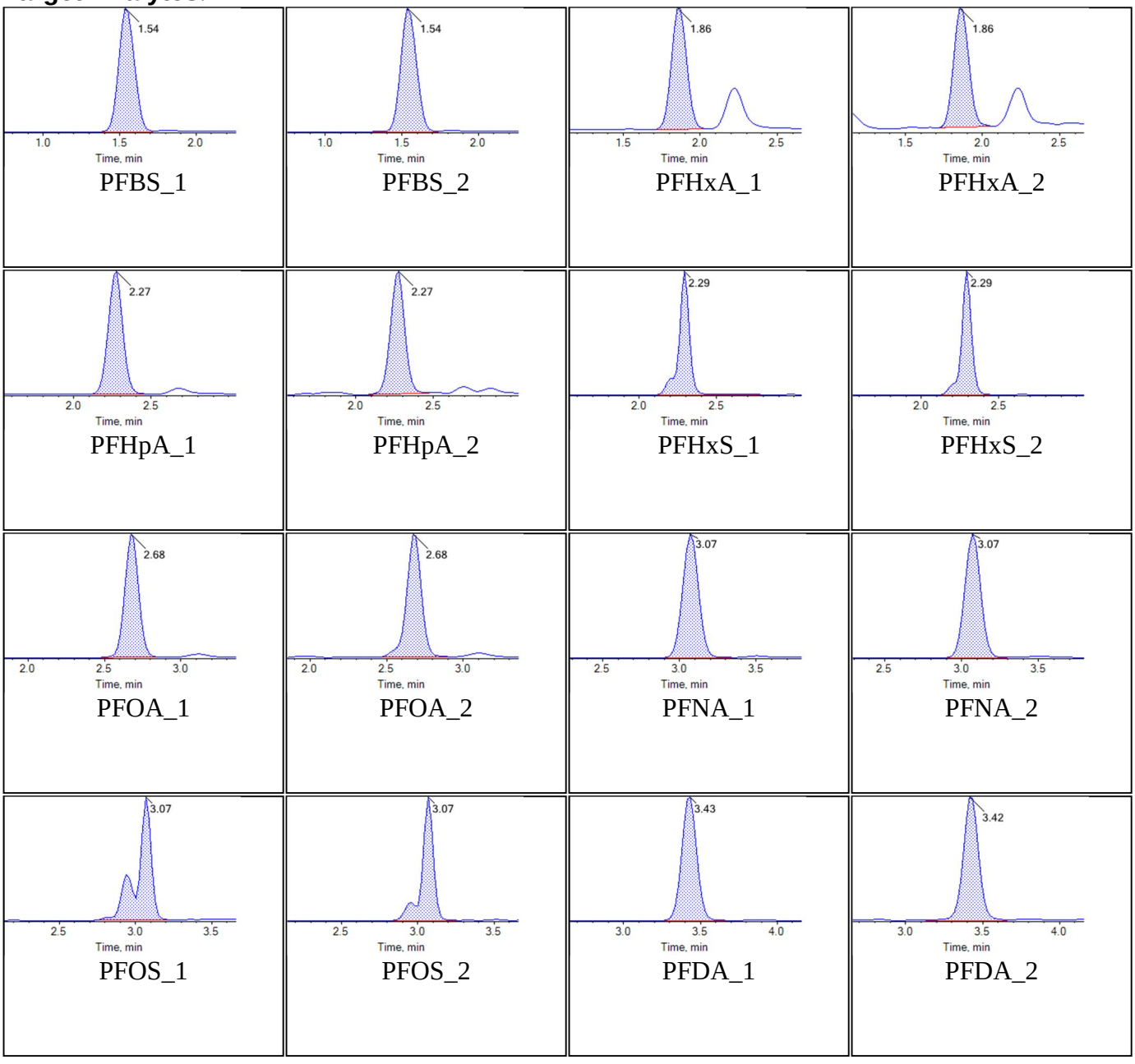
Sample Name	CR989LCS-FS(3)	**Injection Vial**	32
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:26:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

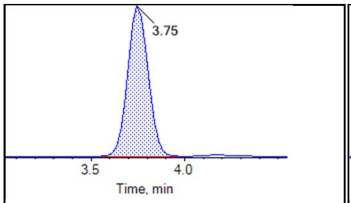
Target Analytes:



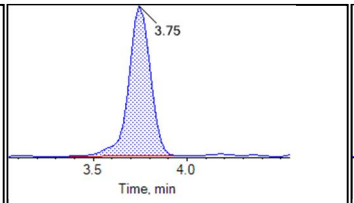
BATTELLE

Chromatogram Report

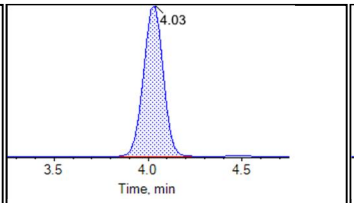
Created with Analyst Reporter
Printed: 24/10/2018 2:01:43 PM



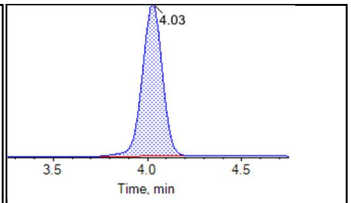
PFUnA_1



PFUnA_2



PFDoA_1



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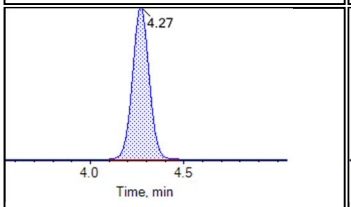
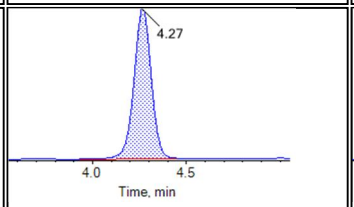
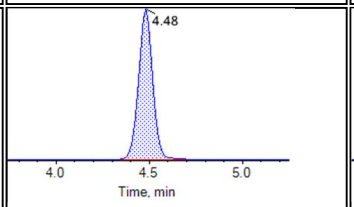


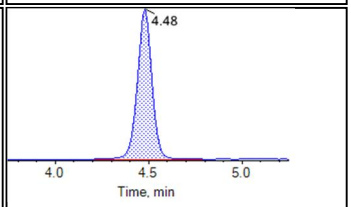
PFTrDA_1



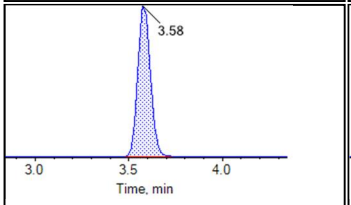
PFTrDA_2



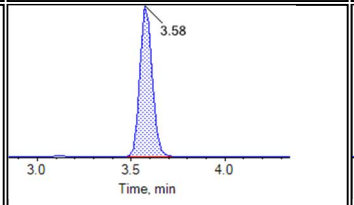
PFTeDA_1



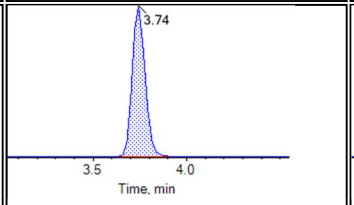
PFTeDA_2



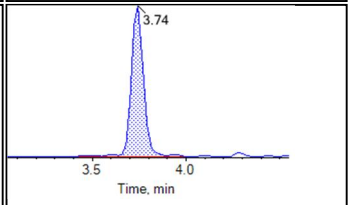
NMeFOSAA_1



NMeFOSAA_2

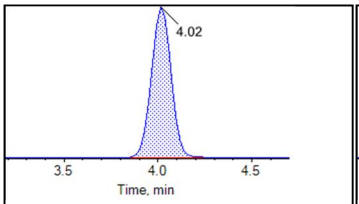


NEtFOSAA_1

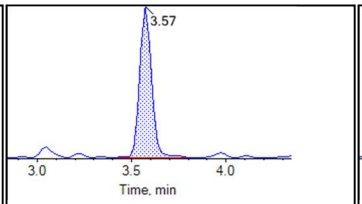


NEtFOSAA_2

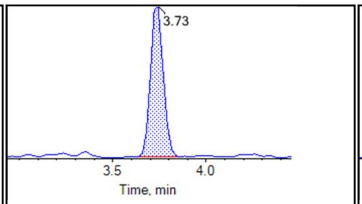
Internal Standards:



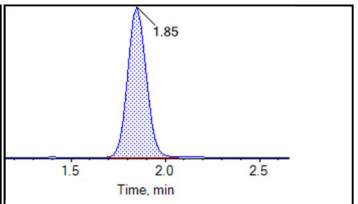
13C2-PFDoA



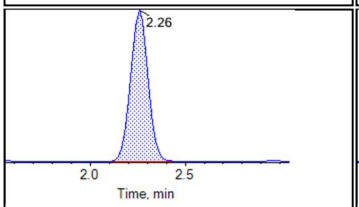
d3-MeFOSAA



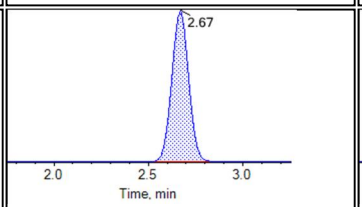
d5-EtFOSAA



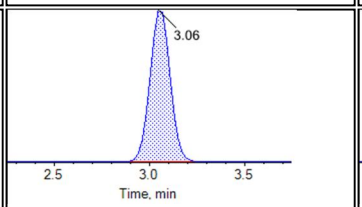
13C5-PFHxA



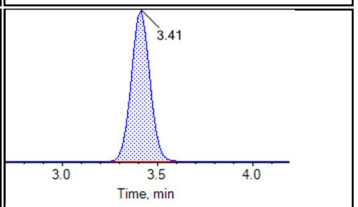
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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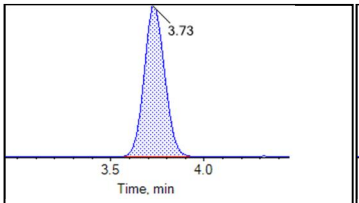
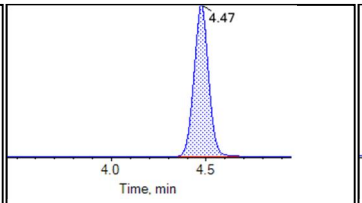
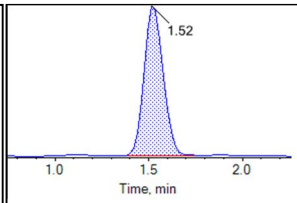


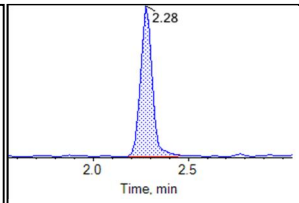
13C7-PFUnA



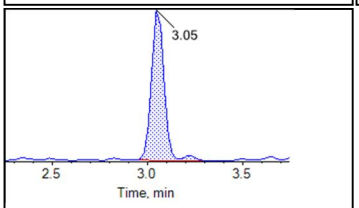
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

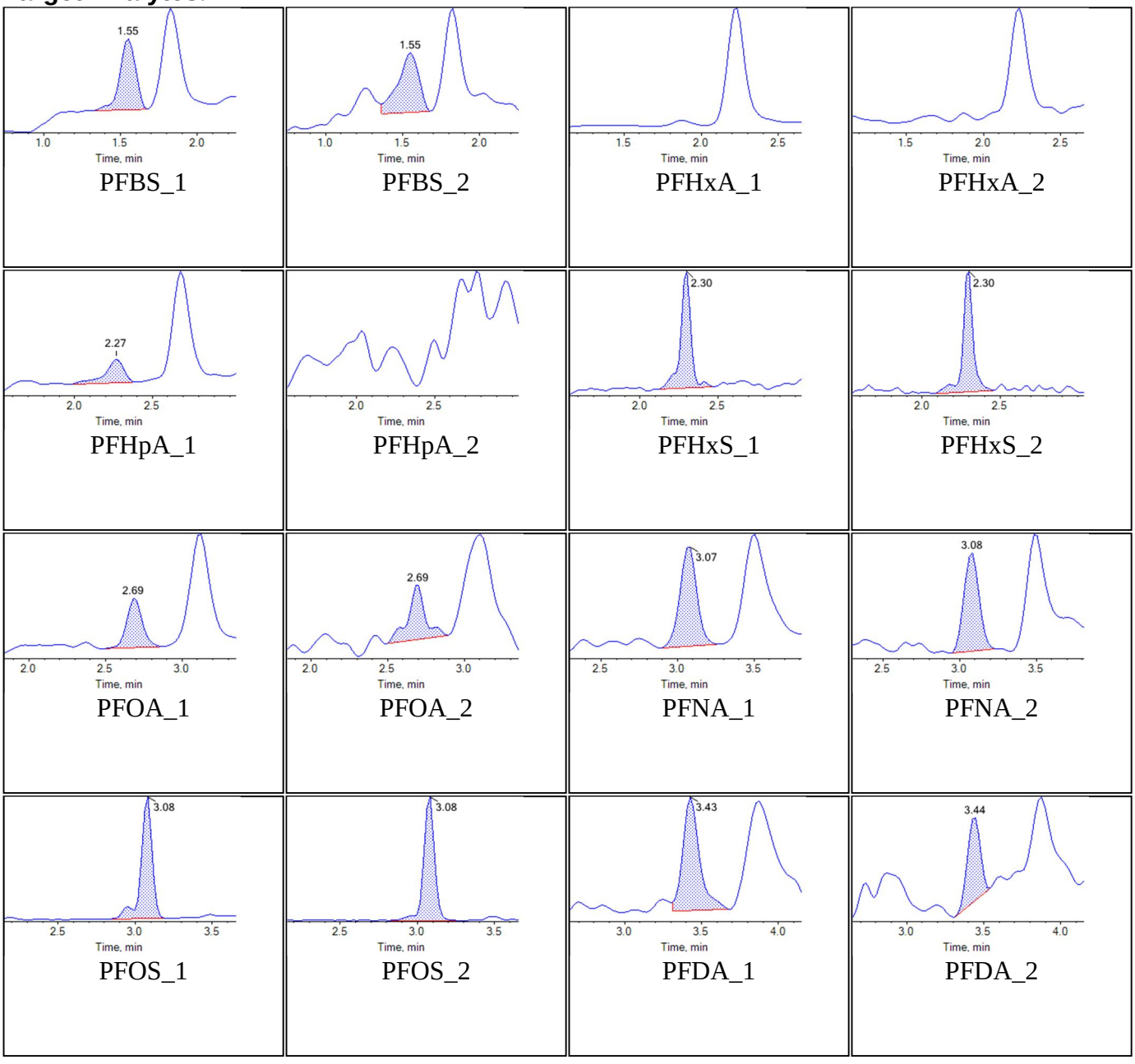
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:01:47 PM

Sample Name	J8658-FS(3)	**Injection Vial**	33
Sample ID	VC-CS12-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:37:17	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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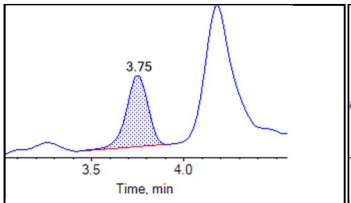
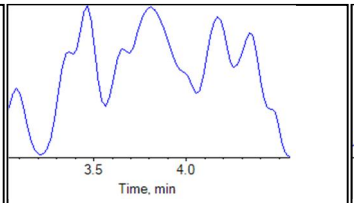
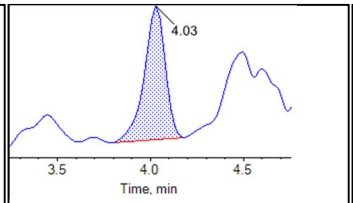


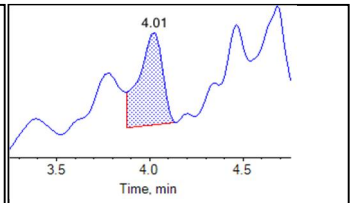
PFUnA_1



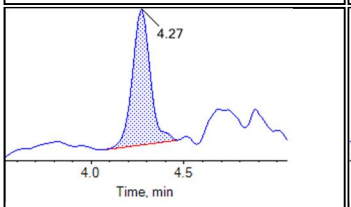
PFUnA_2



PFDoA_1



PFDoA_2



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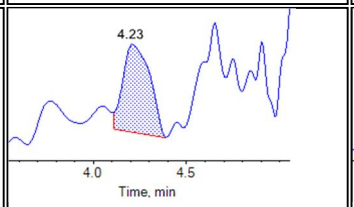
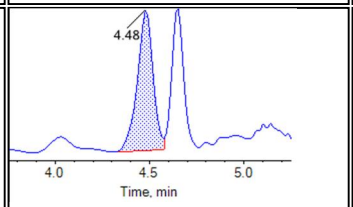
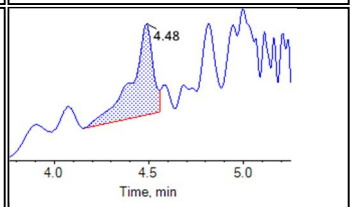


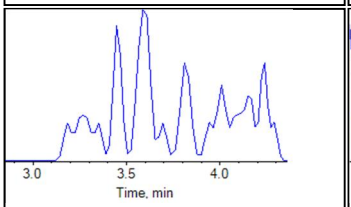
PFTrDA_2



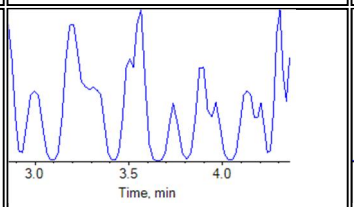
PFTeDA_1



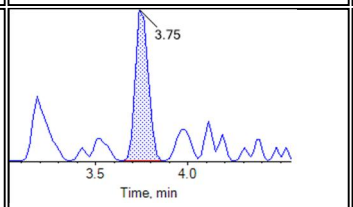
PFTeDA_2



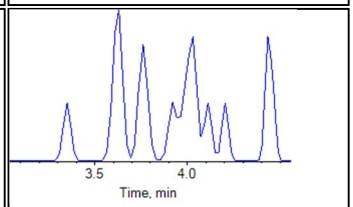
NMeFOSAA_1



NMeFOSAA_2

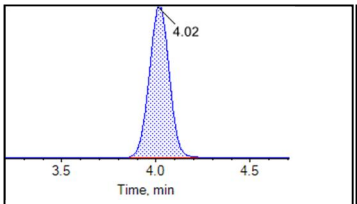


NEtFOSAA_1

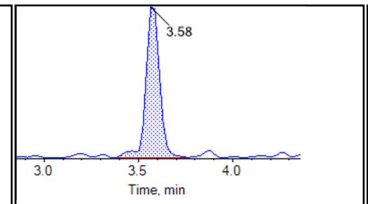


NEtFOSAA_2

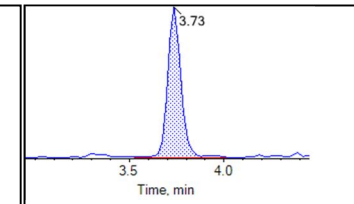
Internal Standards:



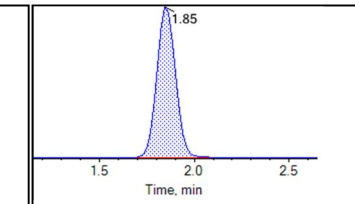
13C2-PFDoA



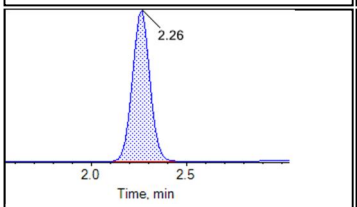
d3-MeFOSAA



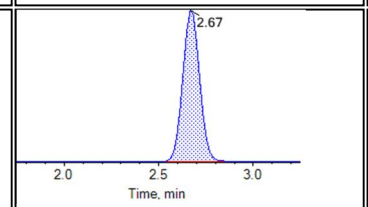
d5-EtFOSAA



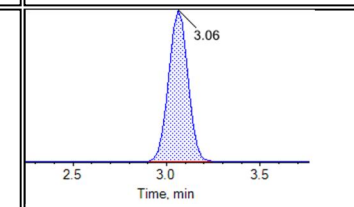
13C5-PFHxA



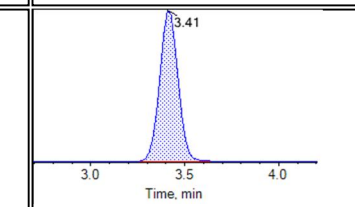
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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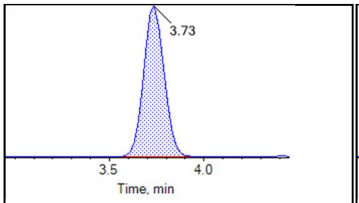
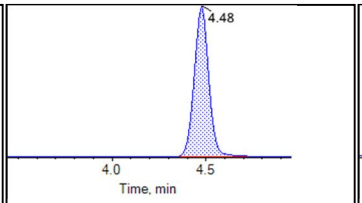
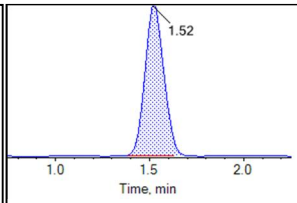


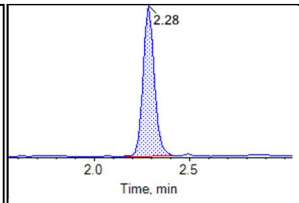
13C7-PFUnA



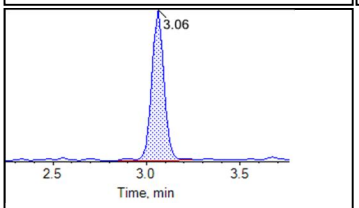
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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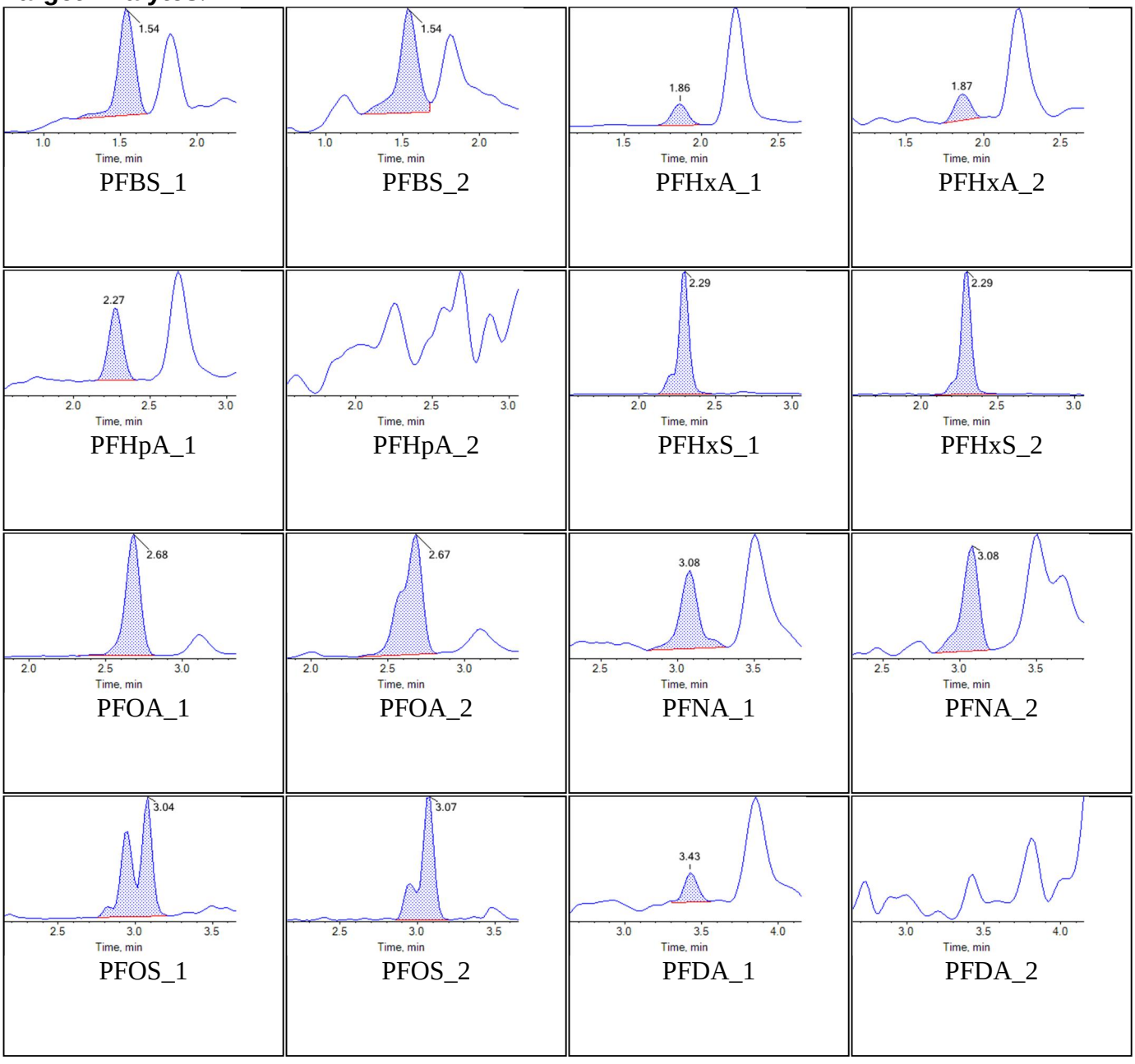
Sample Name	J8659-FS(3)	**Injection Vial**	34
Sample ID	VC-CS12-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:48:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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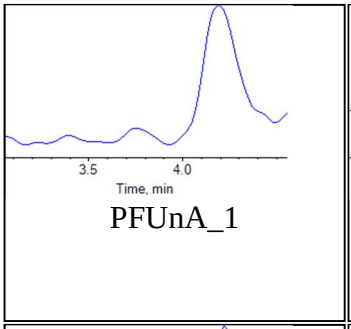
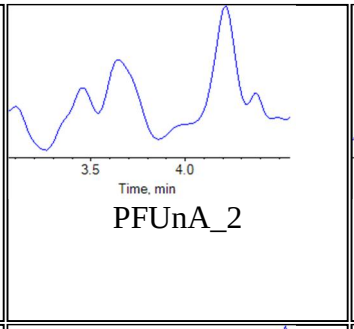
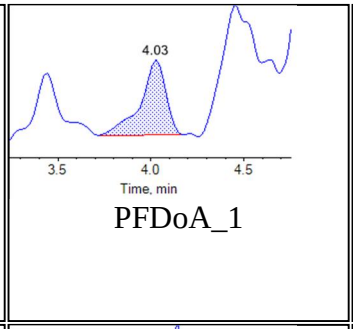


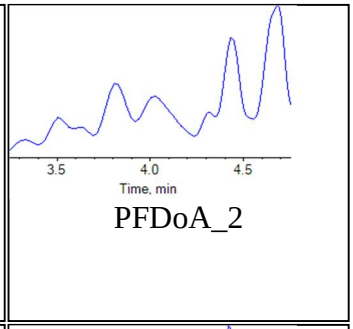
PFUnA_1



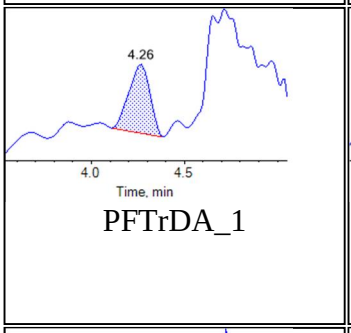
PFUnA_2



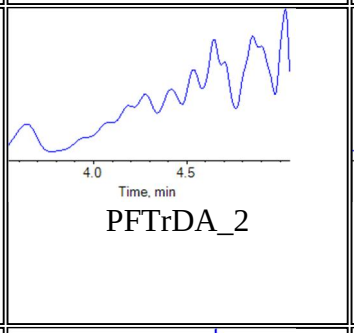
PFDoA_1



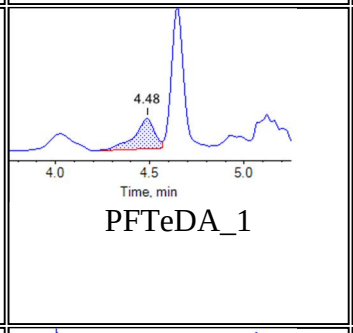
PFDoA_2



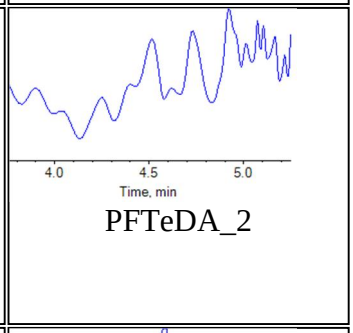
PFTrDA_1



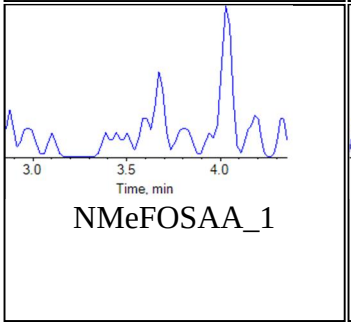
PFTrDA_2



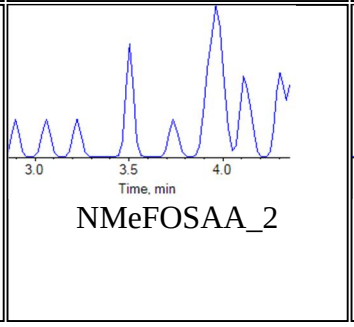
PFTeDA_1



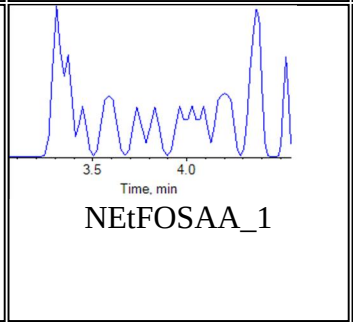
PFTeDA_2



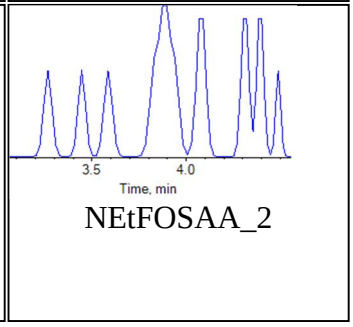
NMeFOSAA_1



NMeFOSAA_2

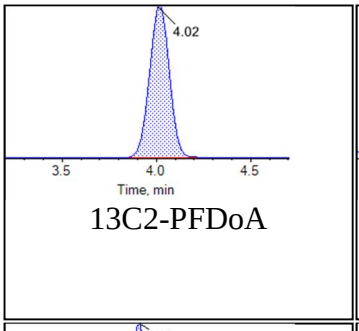


NEtFOSAA_1

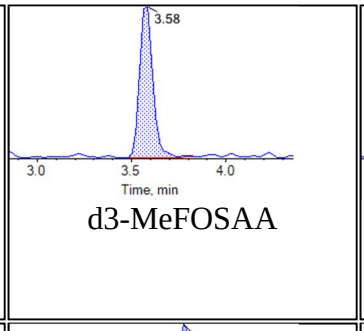


NEtFOSAA_2

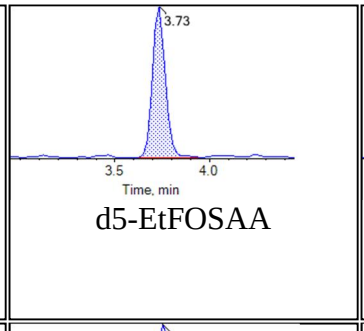
Internal Standards:



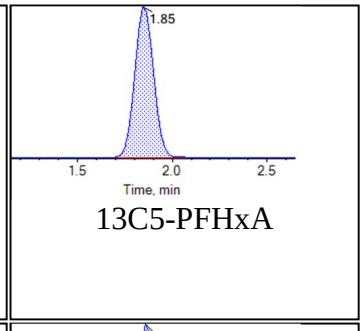
13C2-PFDoA



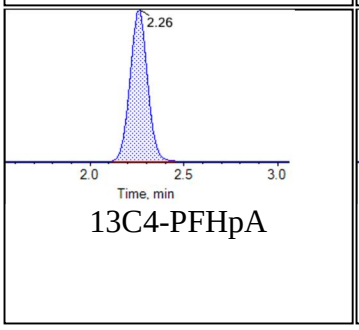
d3-MeFOSAA



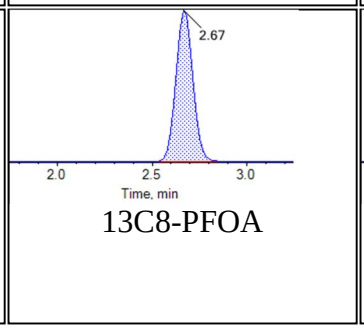
d5-EtFOSAA



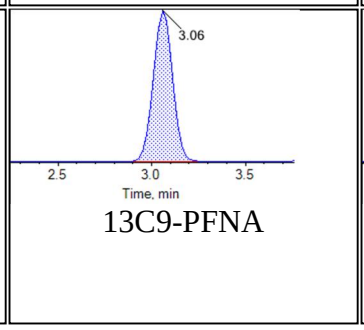
13C5-PFHxA



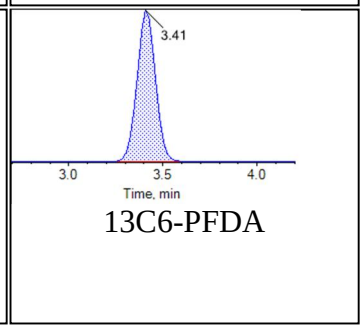
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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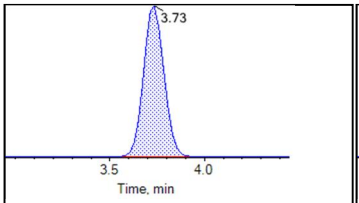
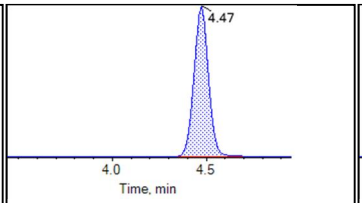
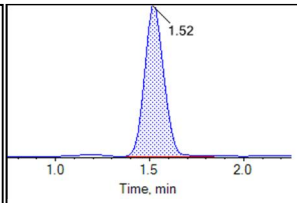


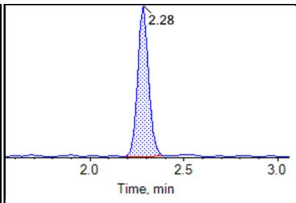
13C7-PFUnA



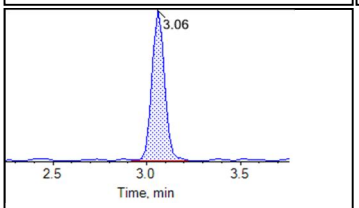
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:01:58 PM

Sample Name	J8660-FS(3)	**Injection Vial**	35
Sample ID	VC-CS12-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:59:00	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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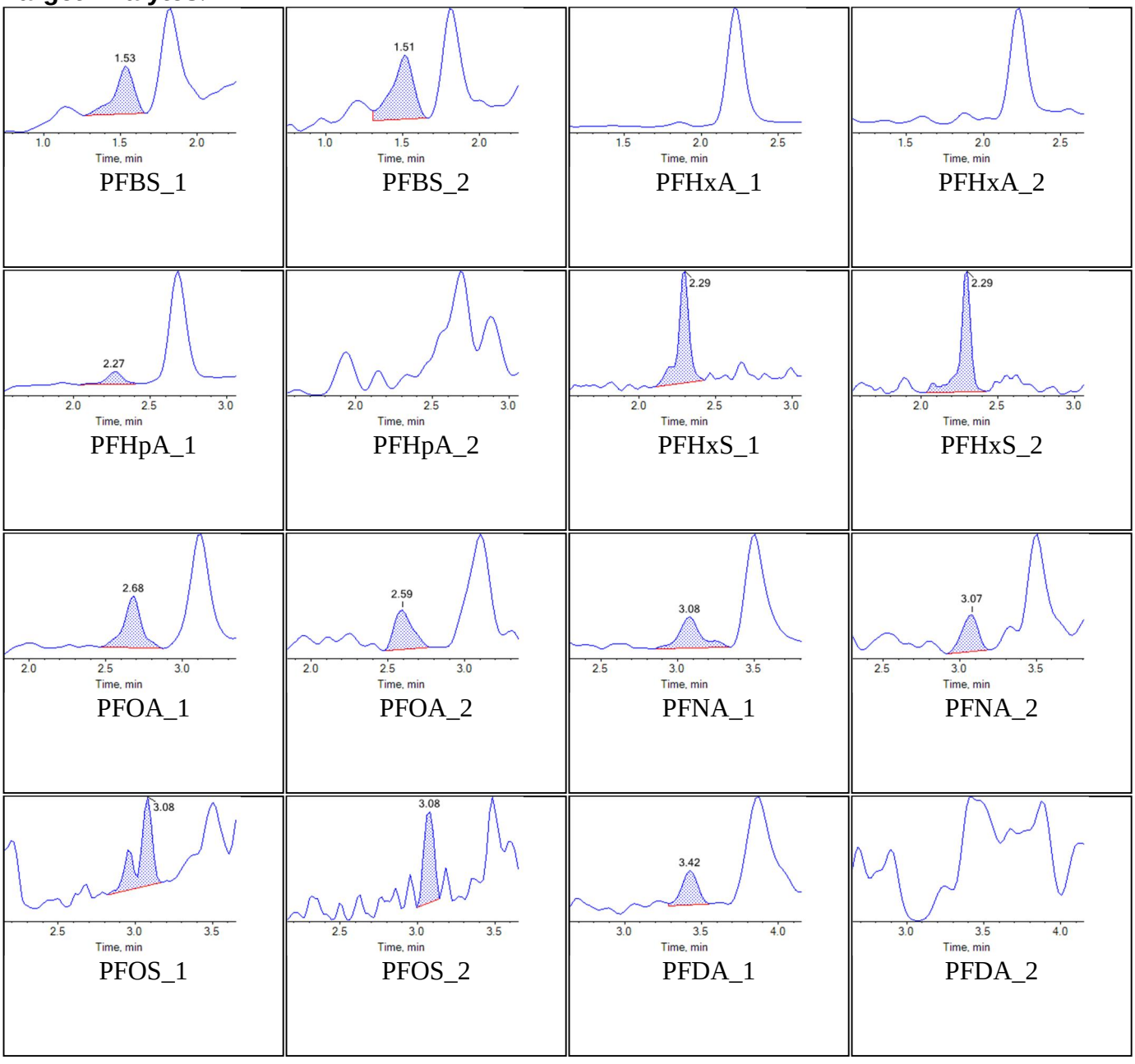

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Chromatogram Report

Created with Analyst Reporter
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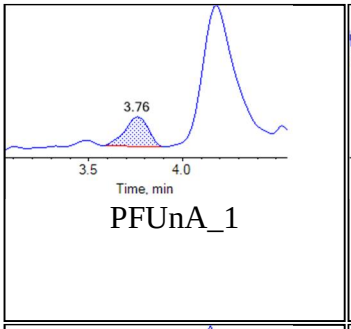
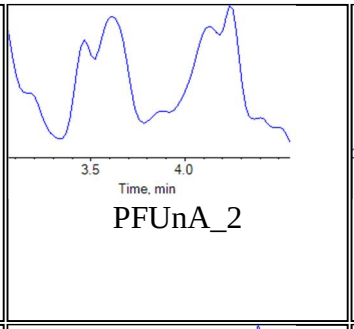
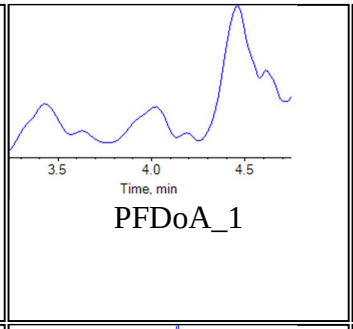


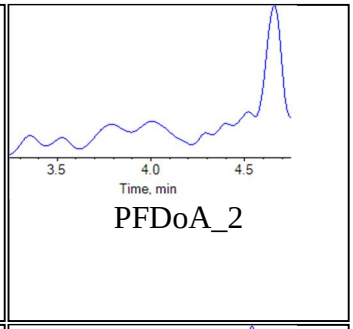
PFUnA_1



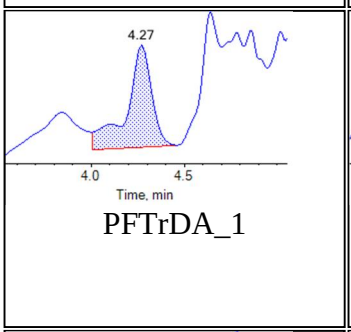
PFUnA_2



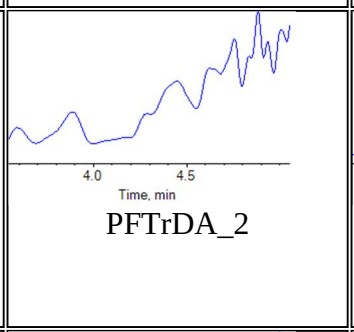
PFDoA_1



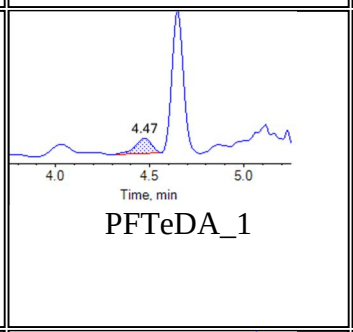
PFDoA_2



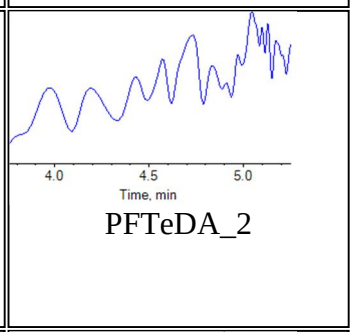
PFTrDA_1



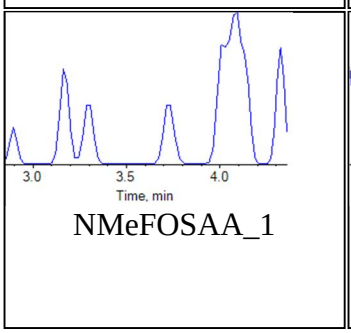
PFTrDA_2



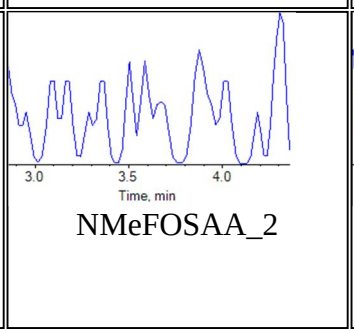
PFTeDA_1



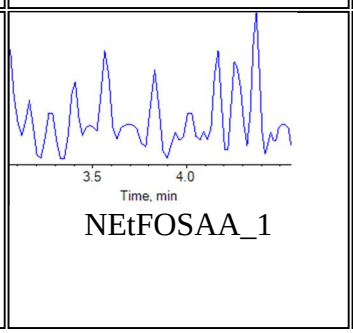
PFTeDA_2



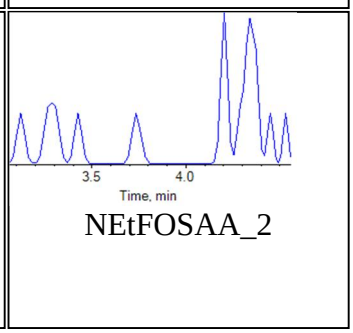
NMeFOSAA_1



NMeFOSAA_2

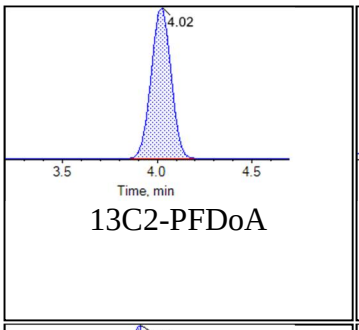


NEtFOSAA_1

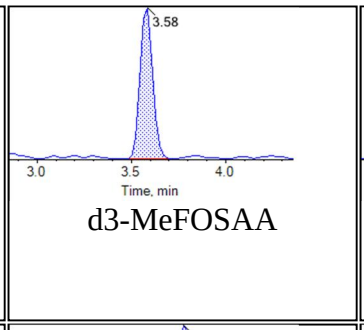


NEtFOSAA_2

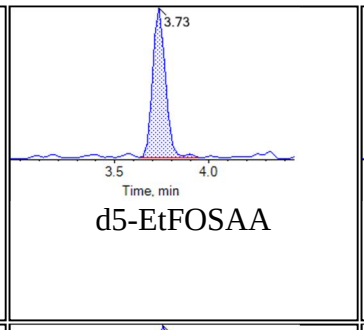
Internal Standards:



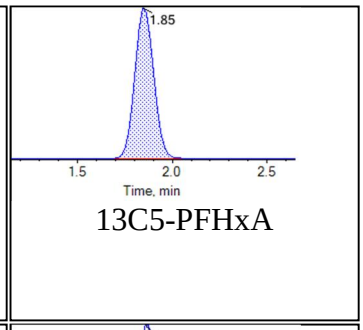
13C2-PFDoA



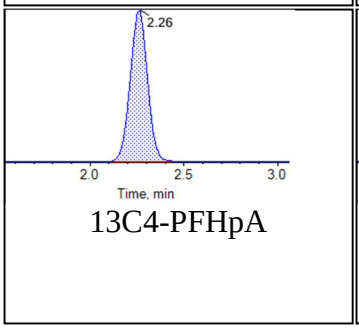
d3-MeFOSAA



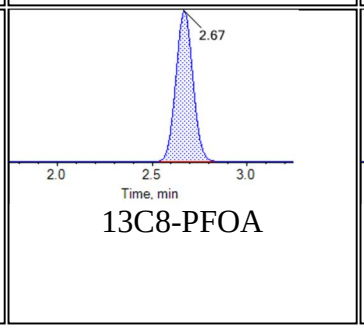
d5-EtFOSAA



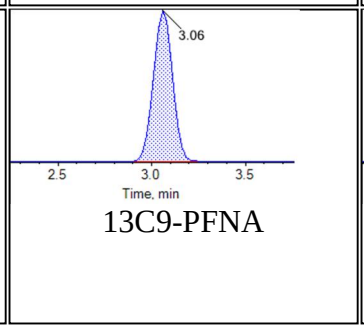
13C5-PFHxA



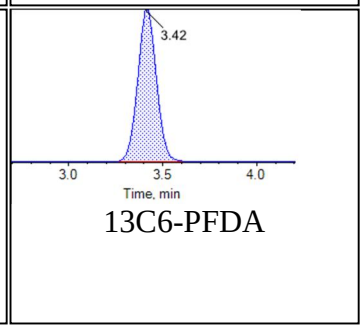
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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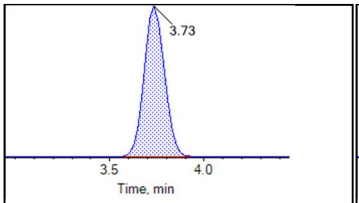
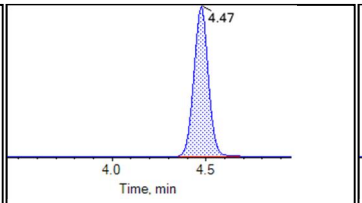
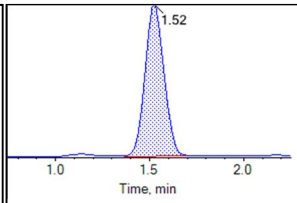


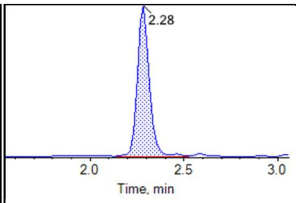
13C7-PFUnA



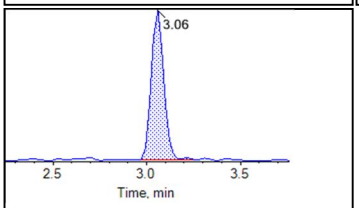
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:02:03 PM

Sample Name	J8661-FS(3)	**Injection Vial**	36
Sample ID	VC-CS12-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:09:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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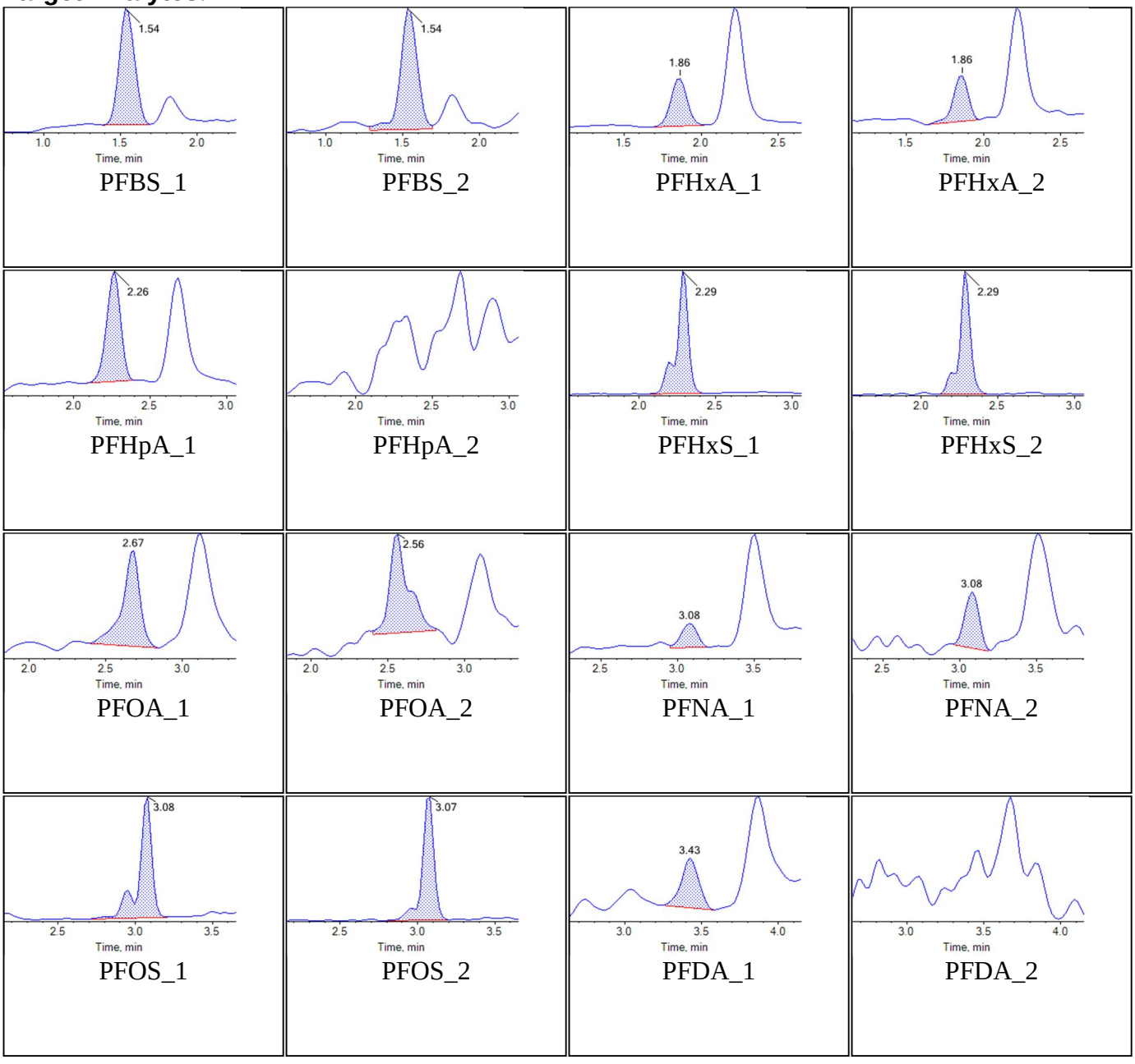

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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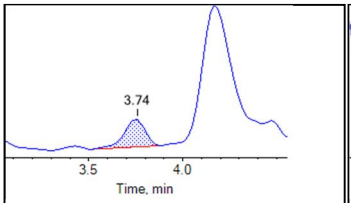
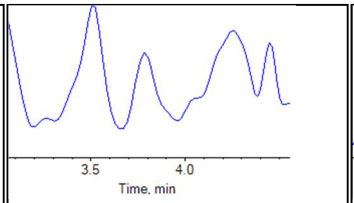
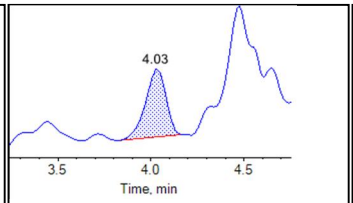


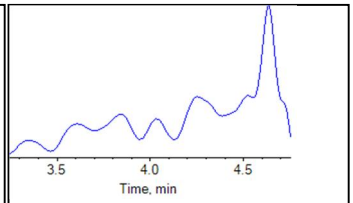
PFUnA_1



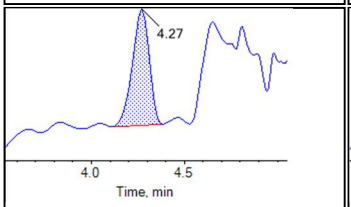
PFUnA_2



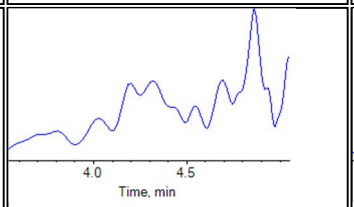
PFDoA_1



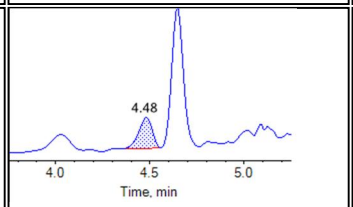
PFDoA_2



PFTrDA_1



PFTrDA_2



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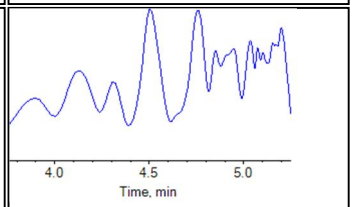

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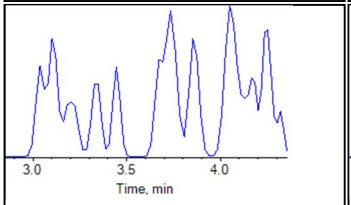
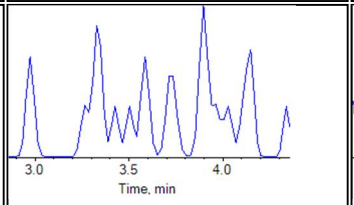
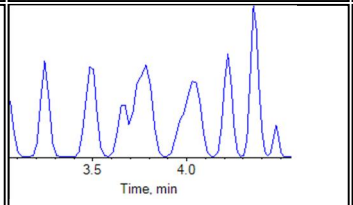


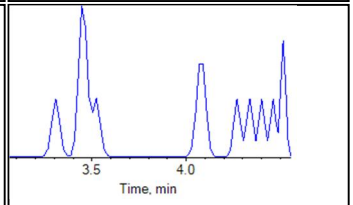
NMeFOSAA_1



NMeFOSAA_2

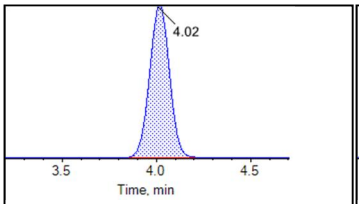


NEtFOSAA_1

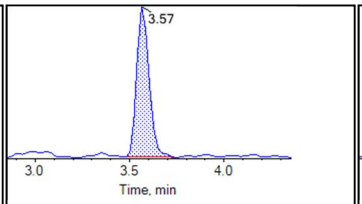


NEtFOSAA_2

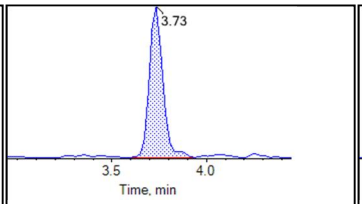
Internal Standards:



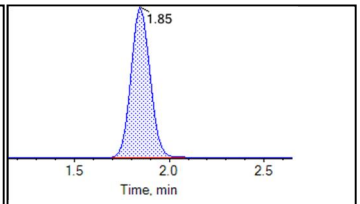
13C2-PFDoA



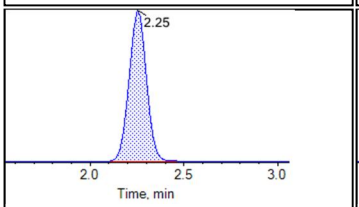
d3-MeFOSAA



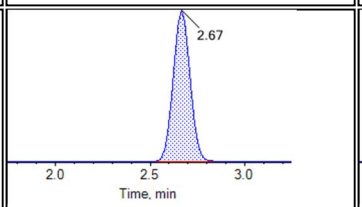
d5-EtFOSAA



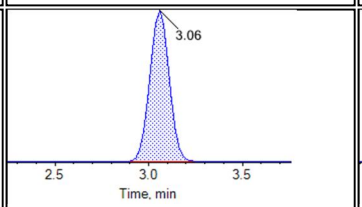
13C5-PFHxA



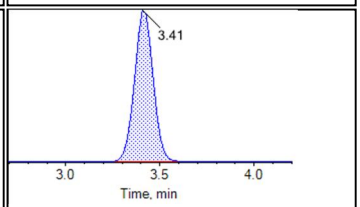
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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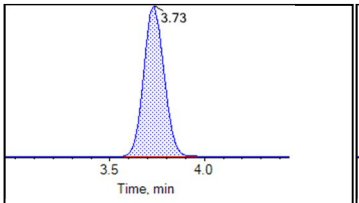
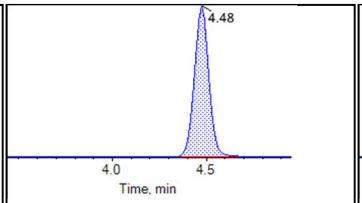
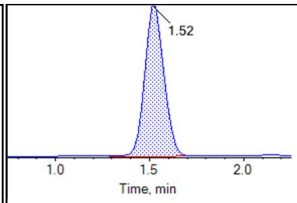


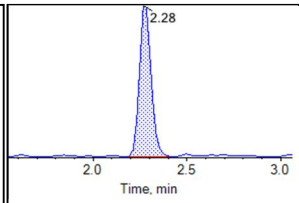
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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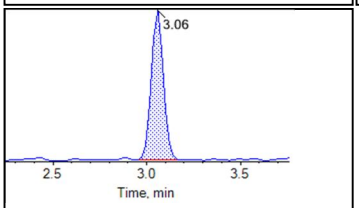


13C8-PFOS

BATTELLE

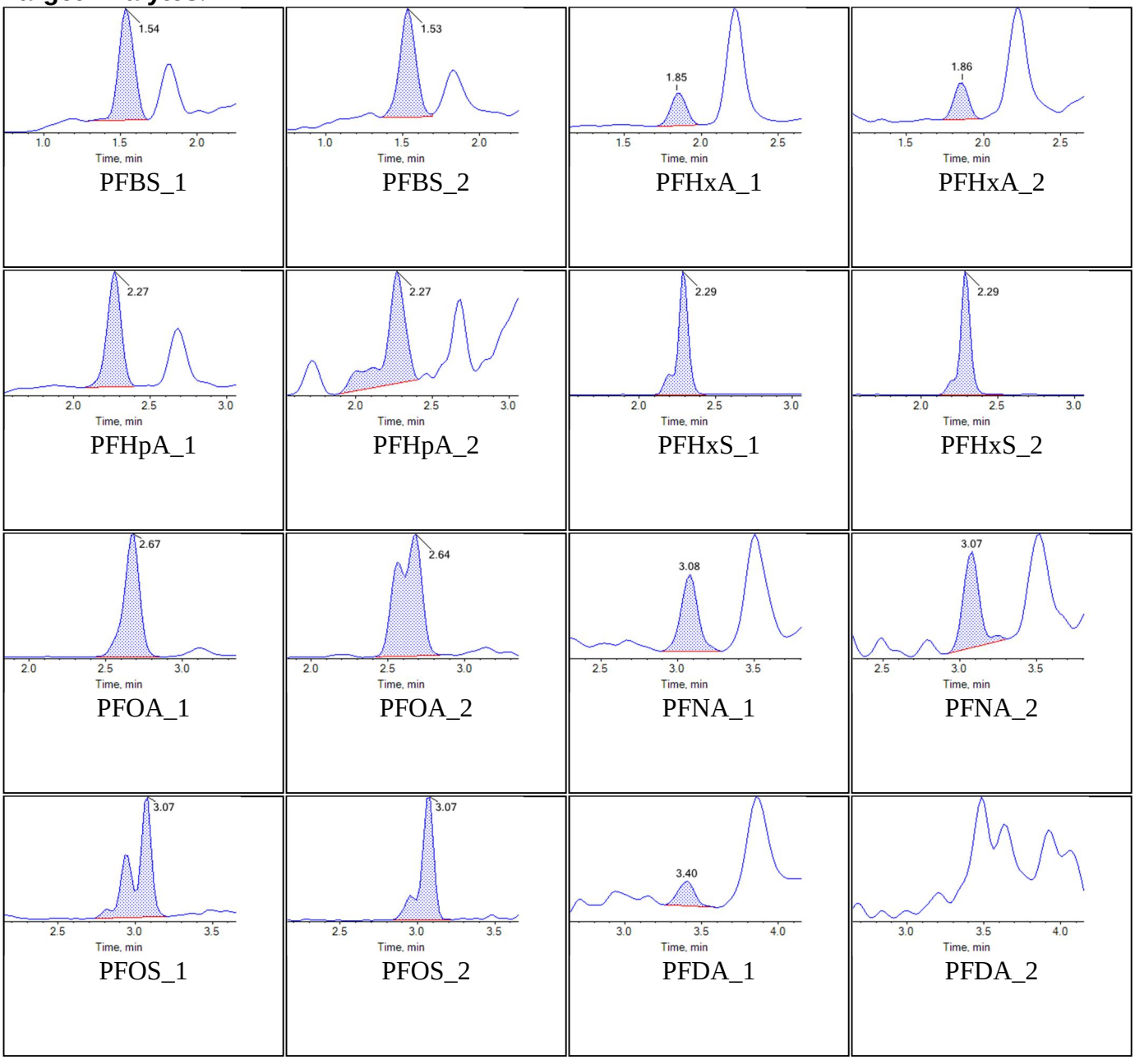
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:02:15 PM

Sample Name	J8662-FS(3)	**Injection Vial**	38
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:31:37	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

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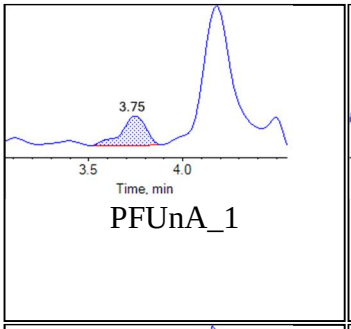
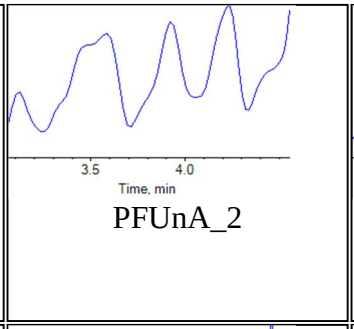
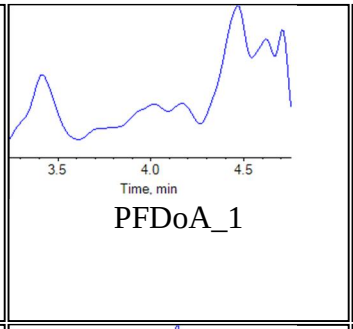


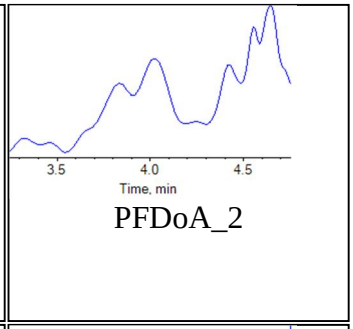
PFUnA_1



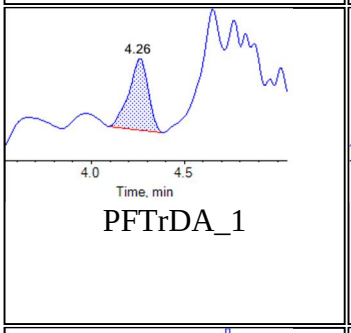
PFUnA_2



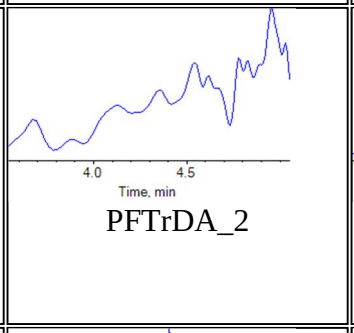
PFDoA_1



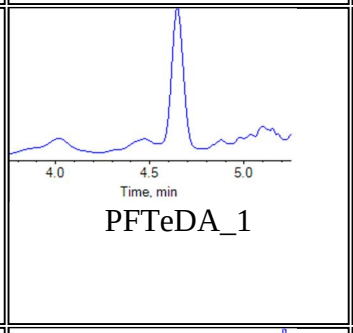
PFDoA_2



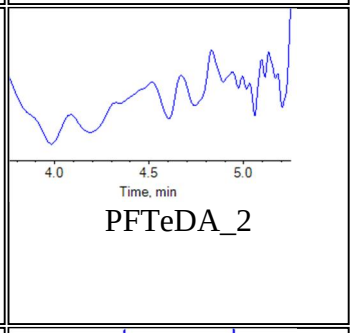
PFTrDA_1



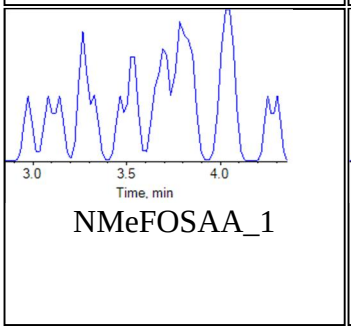
PFTrDA_2



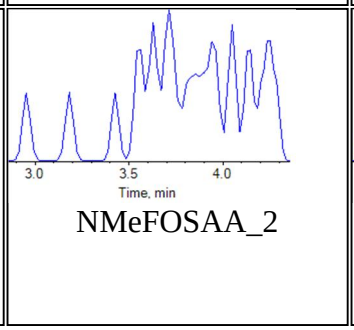
PFTeDA_1



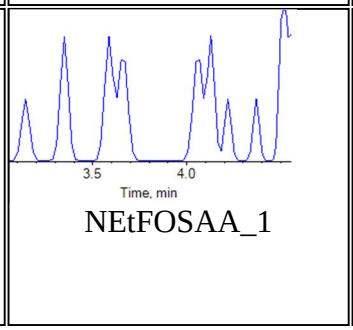
PFTeDA_2



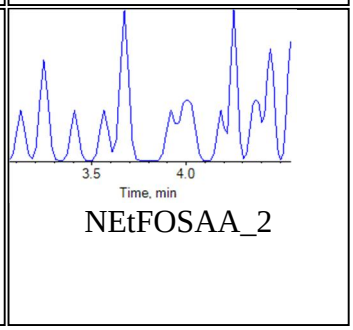
NMeFOSAA_1



NMeFOSAA_2

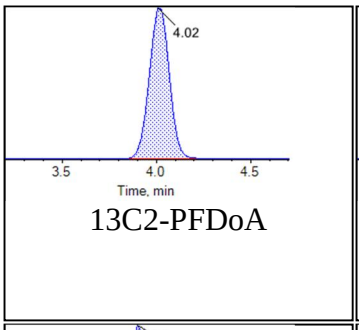


NEtFOSAA_1

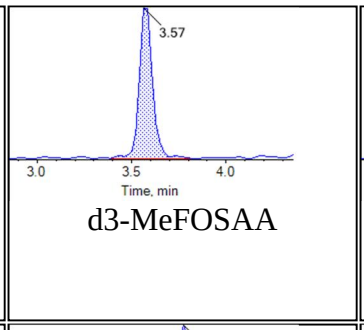


NEtFOSAA_2

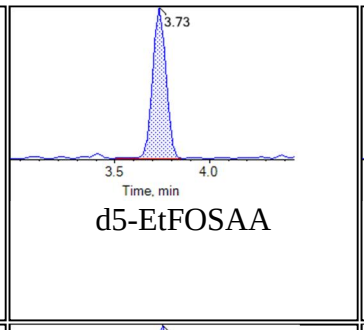
Internal Standards:



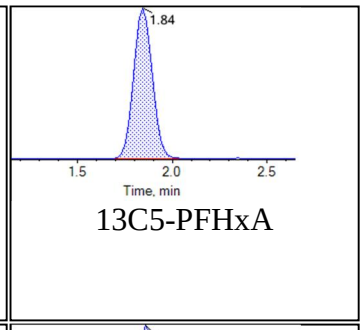
13C2-PFDoA



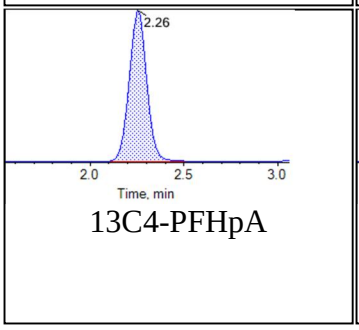
d3-MeFOSAA



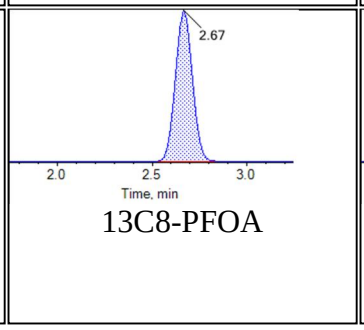
d5-EtFOSAA



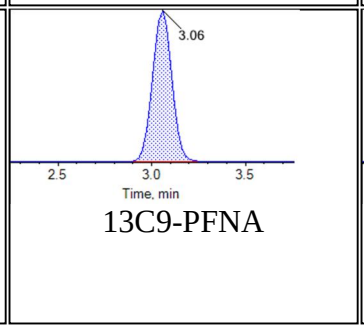
13C5-PFHxA



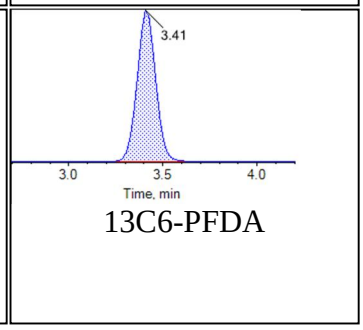
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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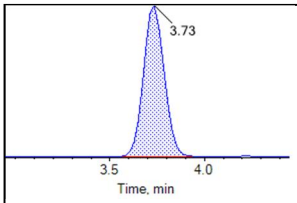
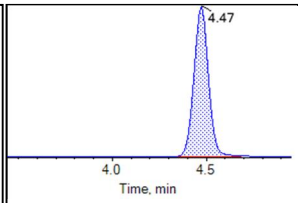
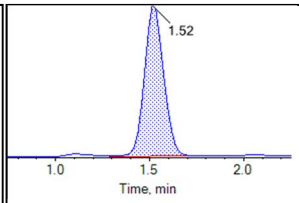


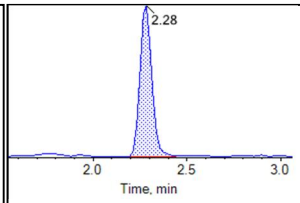
13C7-PFUnA



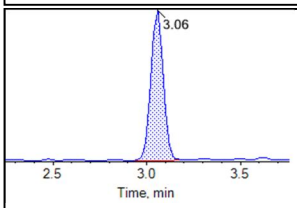
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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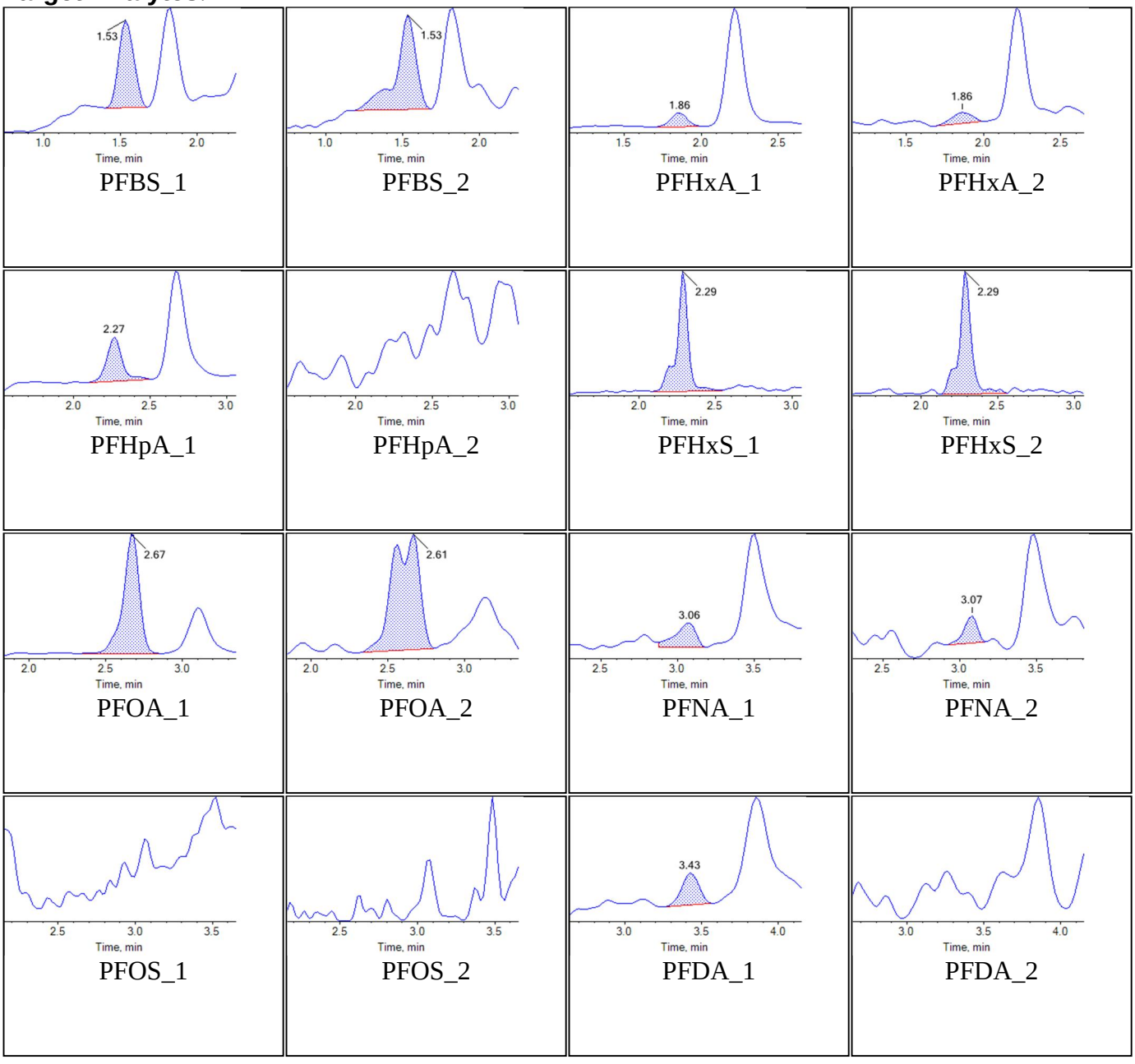
Sample Name	J8663-FS(3)	**Injection Vial**	39
Sample ID	VC-CS12-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:42:29	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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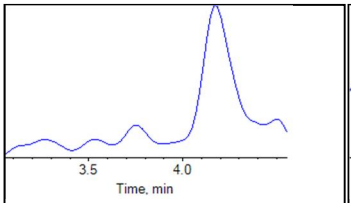
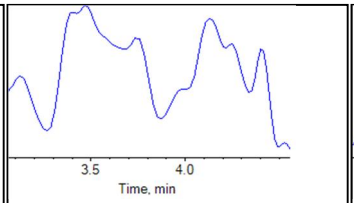
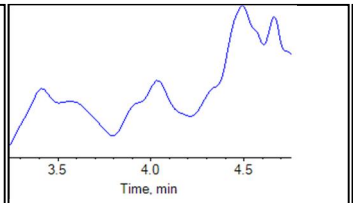


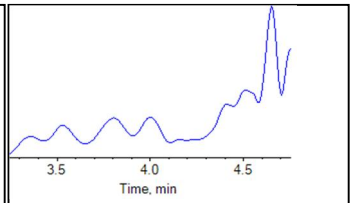
PFUnA_1



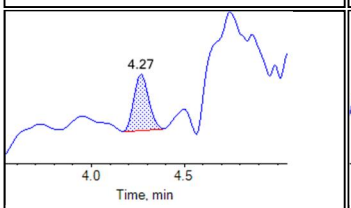
PFUnA_2



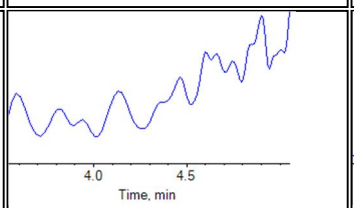
PFDoA_1



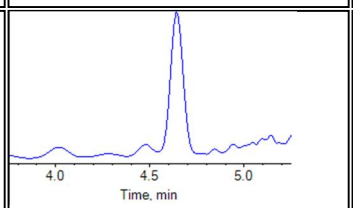
PFDoA_2



PFTrDA_1



PFTrDA_2



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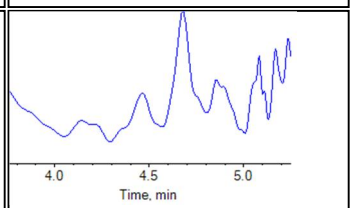

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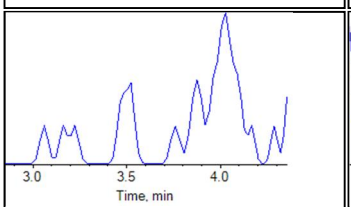
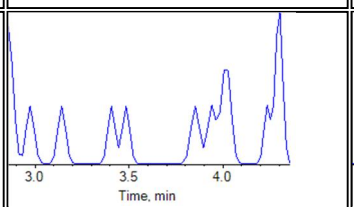
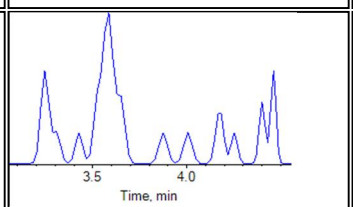


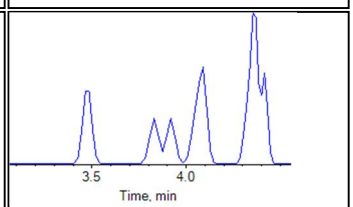
NMeFOSAA_1



NMeFOSAA_2

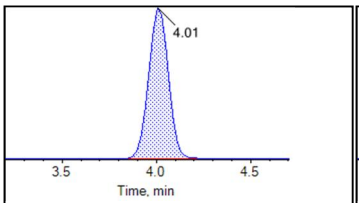


NEtFOSAA_1

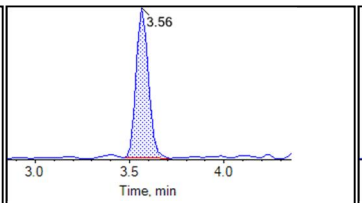


NEtFOSAA_2

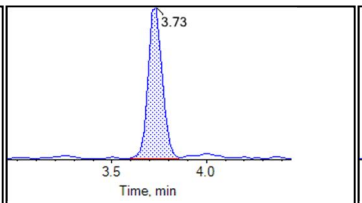
Internal Standards:



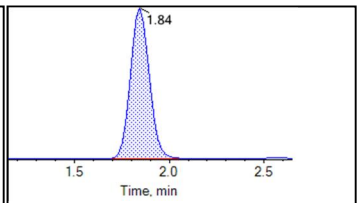
13C2-PFDoA



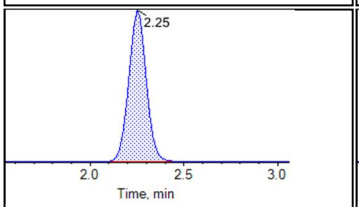
d3-MeFOSAA



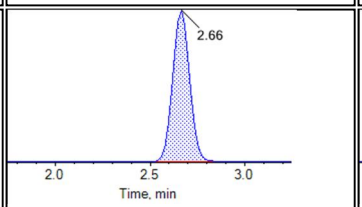
d5-EtFOSAA



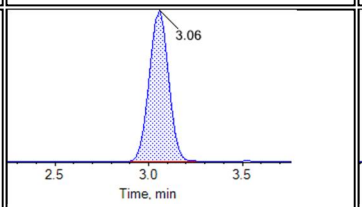
13C5-PFHxA



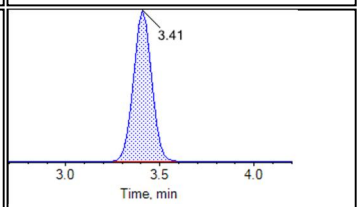
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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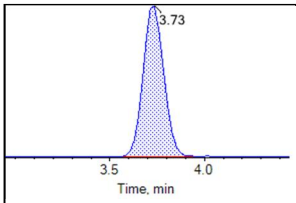
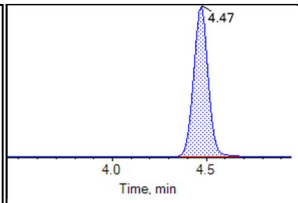
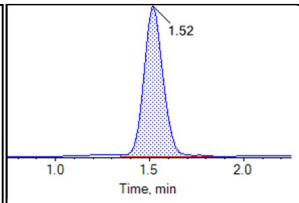


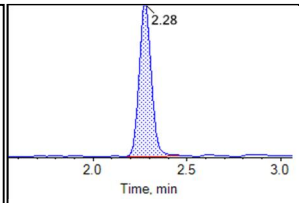
13C7-PFUnA



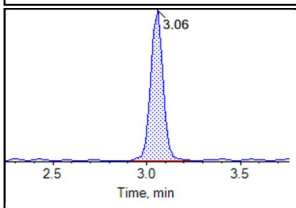
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:02:24 PM

Sample Name	J8664-FS(3)	**Injection Vial**	40
Sample ID	VC-CS12-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:53:22	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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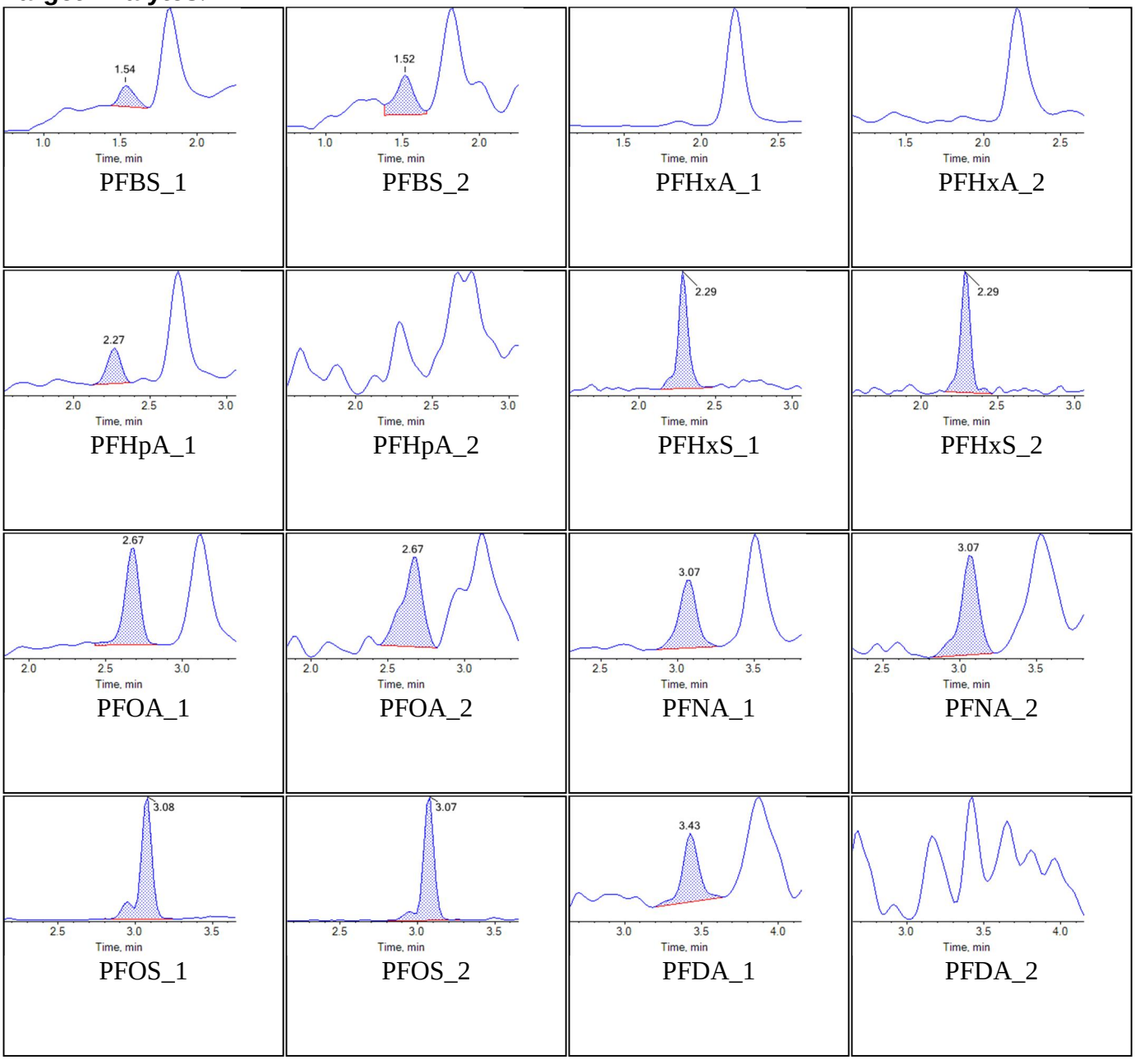

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Chromatogram Report

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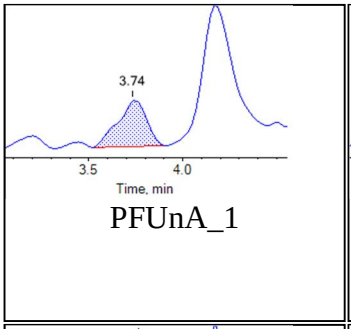
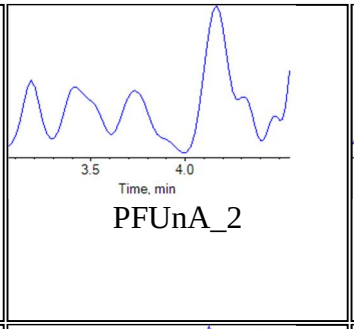
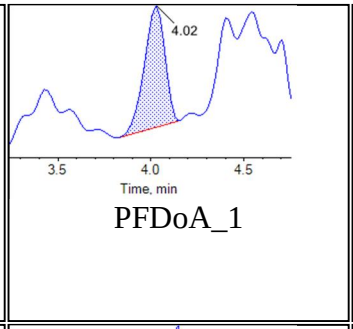


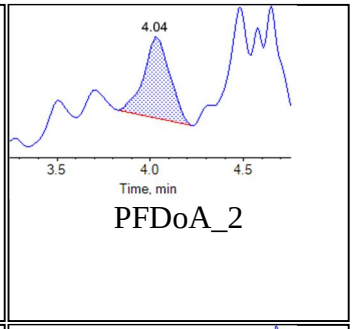
PFUnA_1



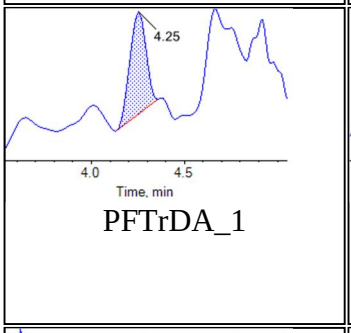
PFUnA_2



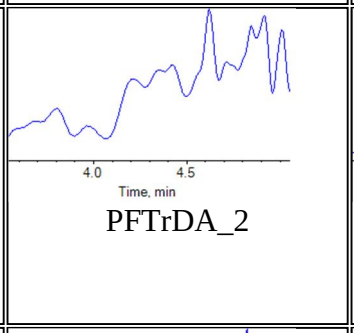
PFDoA_1



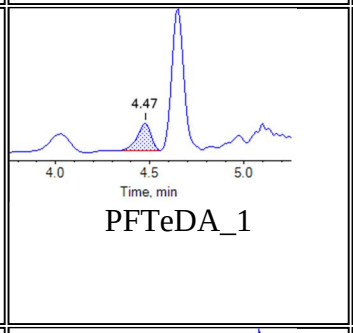
PFDoA_2



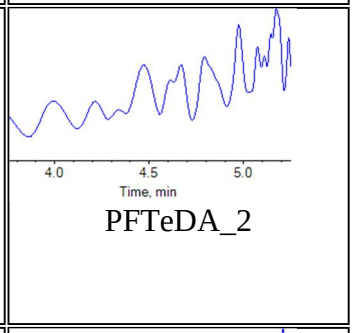
PFTrDA_1



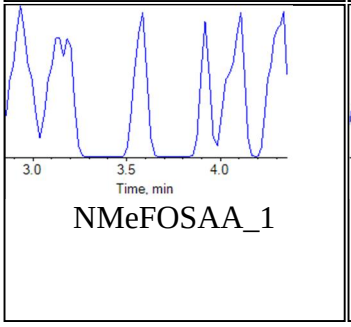
PFTrDA_2



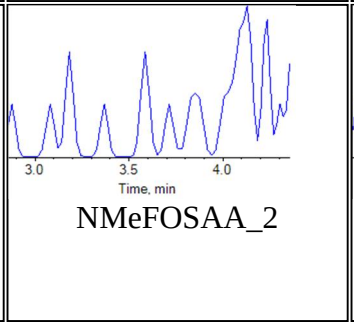
PFTeDA_1



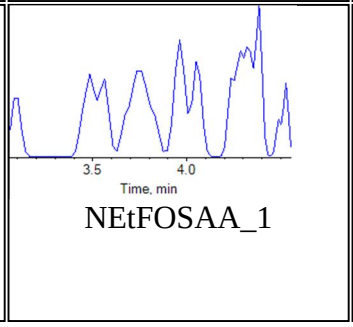
PFTeDA_2



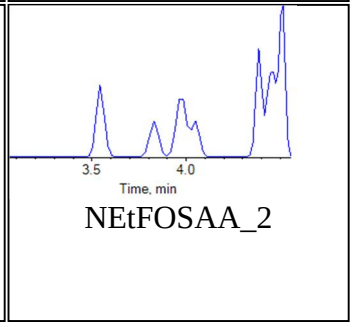
NMeFOSAA_1



NMeFOSAA_2

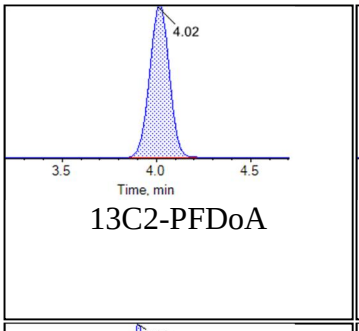


NEtFOSAA_1

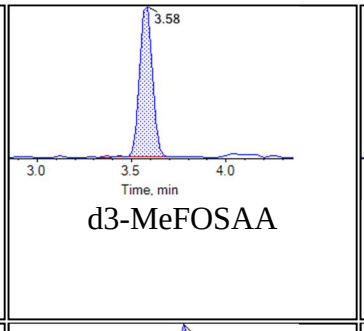


NEtFOSAA_2

Internal Standards:



13C2-PFDoA



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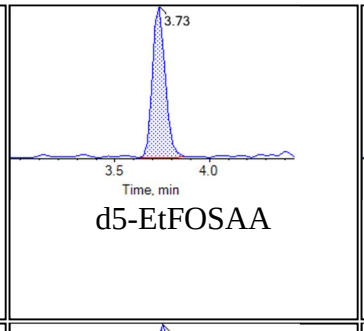

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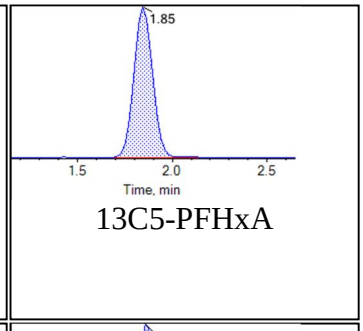

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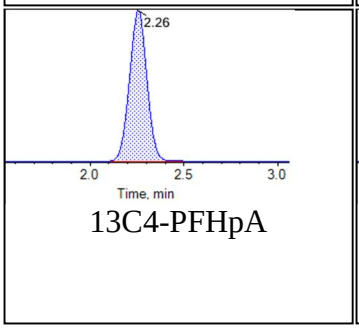

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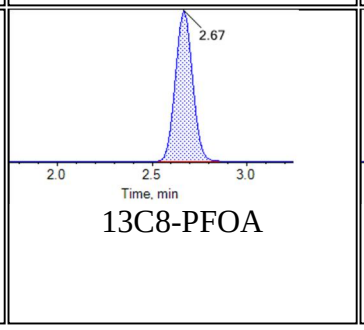
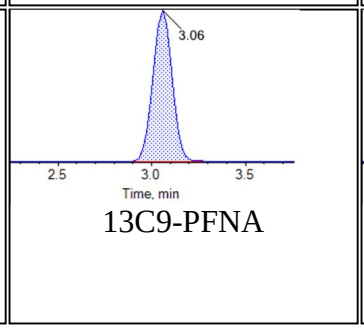
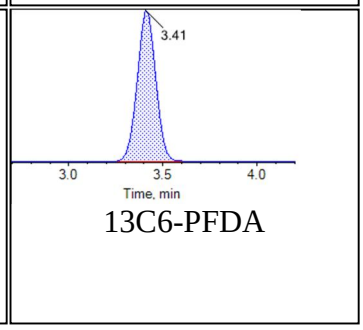


13C8-PFOA



13C9-PFNA



13C6-PFDA

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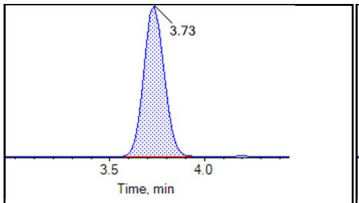
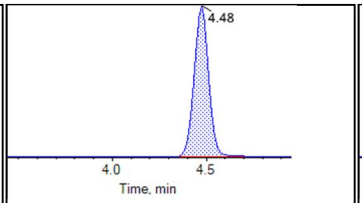


13C7-PFUnA



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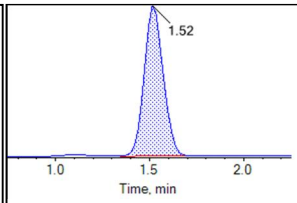
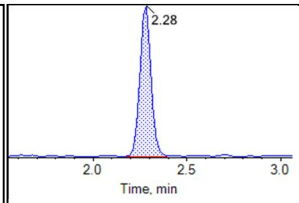


13C3-PFBS



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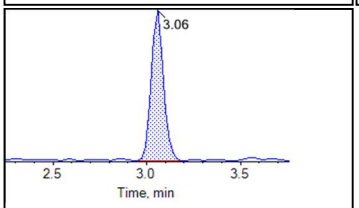

13C8-PFOS

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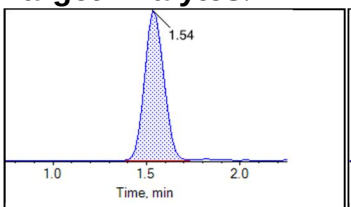
Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



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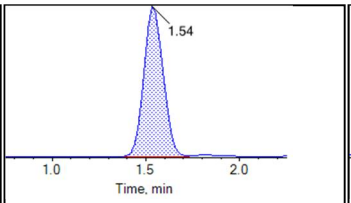

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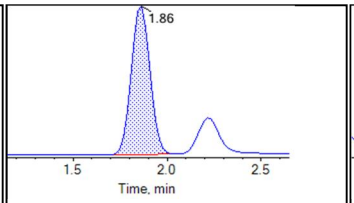

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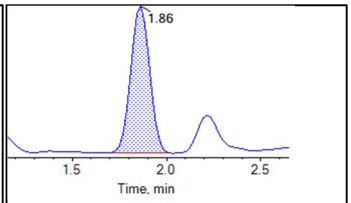

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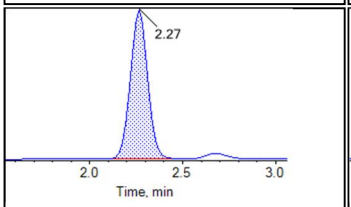

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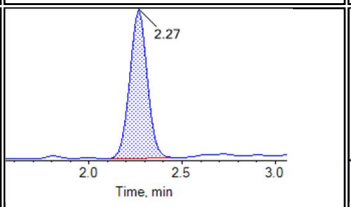

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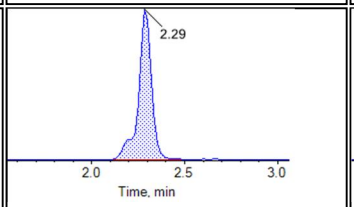

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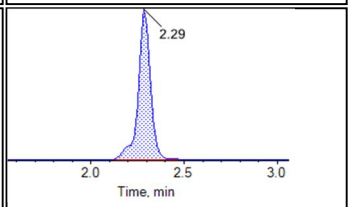

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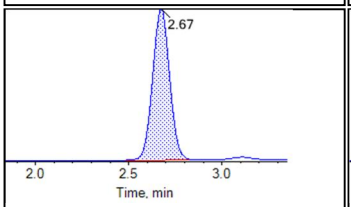

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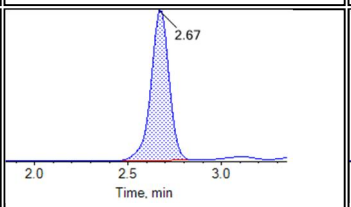

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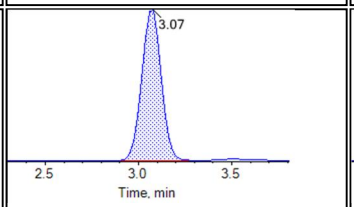

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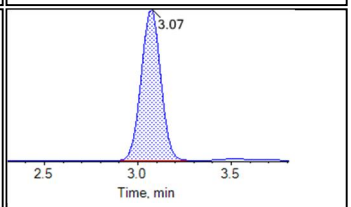

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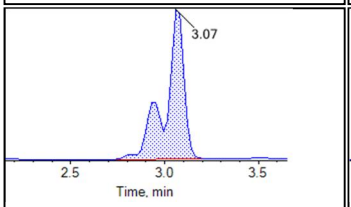

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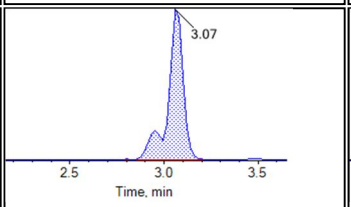

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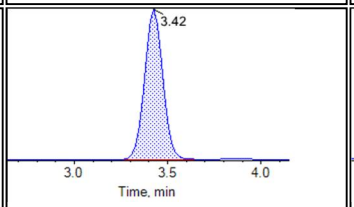

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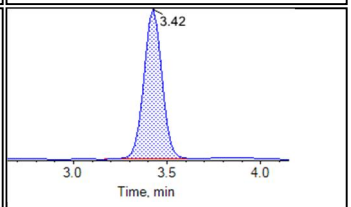

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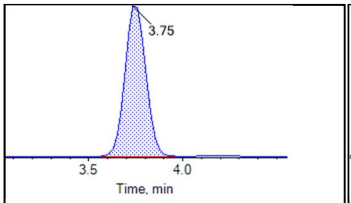

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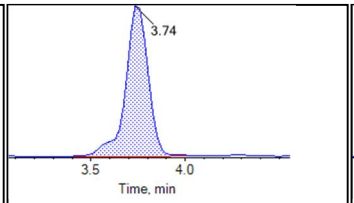

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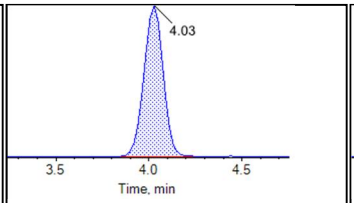

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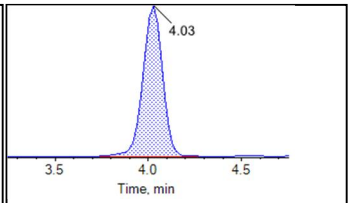

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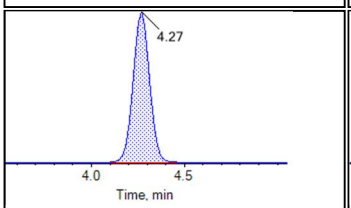

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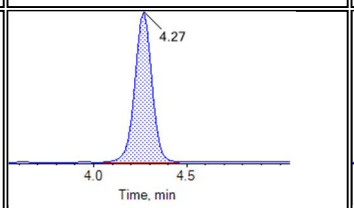

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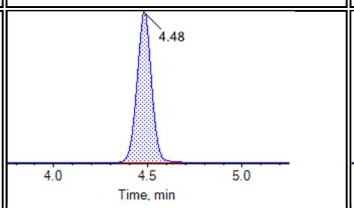

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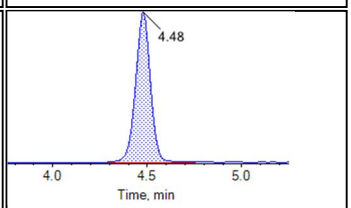

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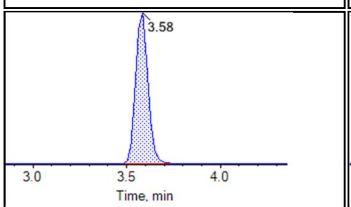

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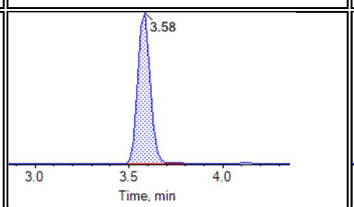

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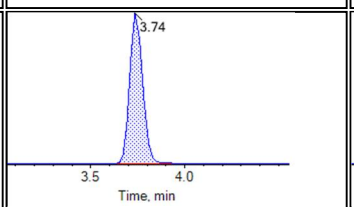

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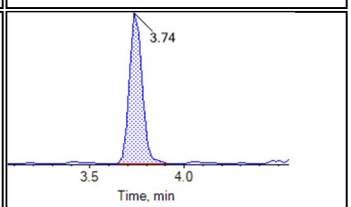

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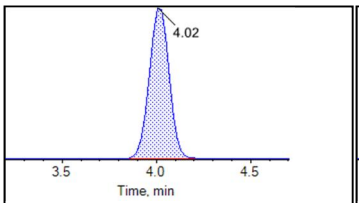

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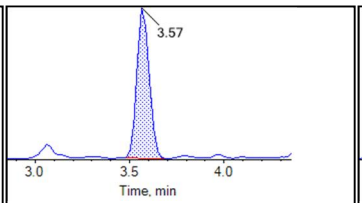

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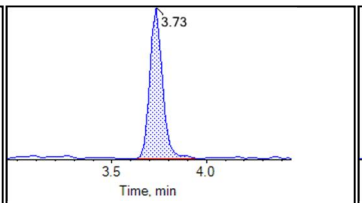

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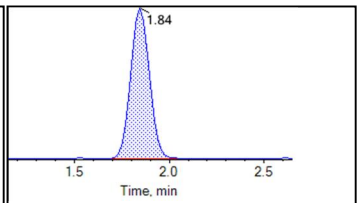

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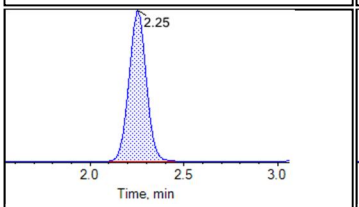

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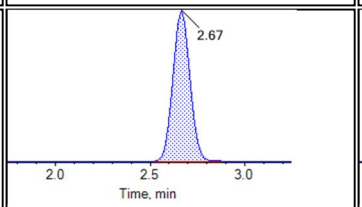

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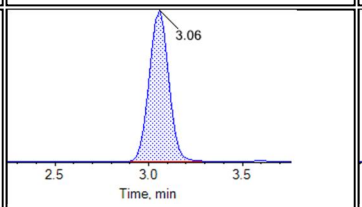

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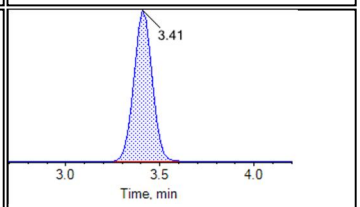

13C6-PFDA

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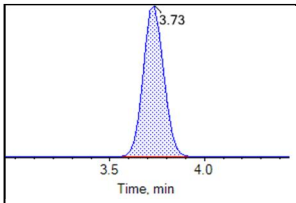
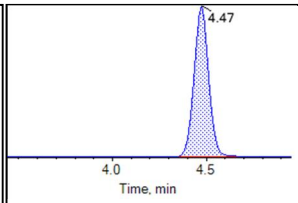


13C7-PFUnA



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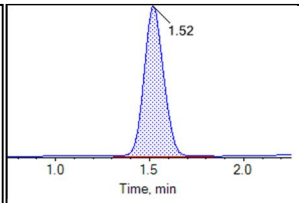

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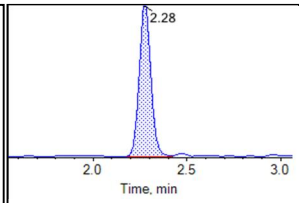
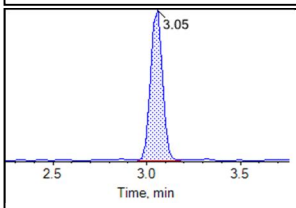


13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	J8666-FS(3)	**Injection Vial**	43
Sample ID	VC-CS12-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:36:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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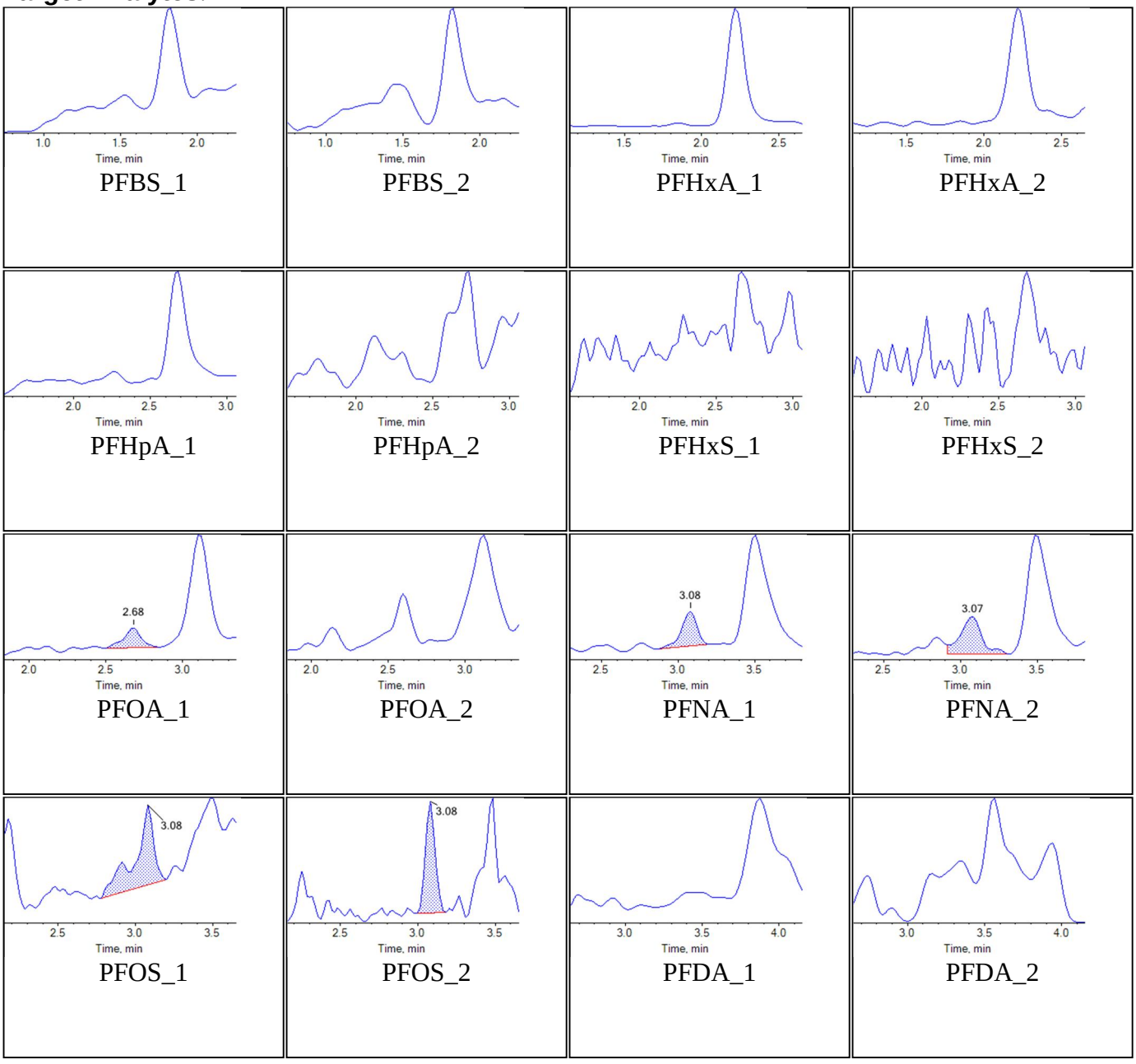
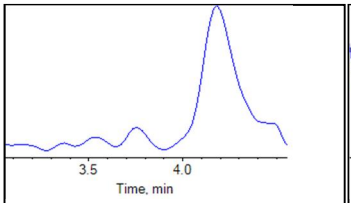


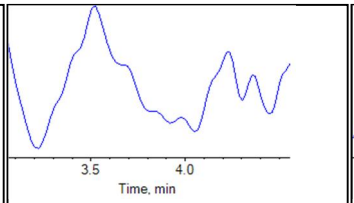
BATTELLE

Chromatogram Report

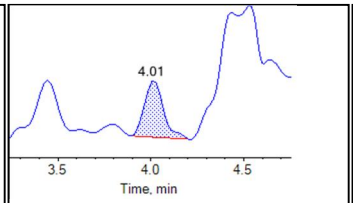
Created with Analyst Reporter
Printed: 24/10/2018 2:02:47 PM



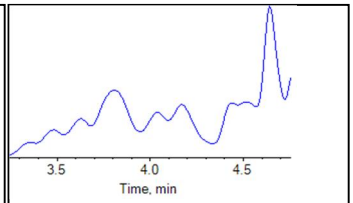
PFUnA_1



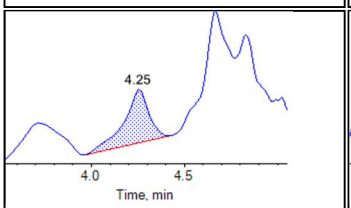
PFUnA_2



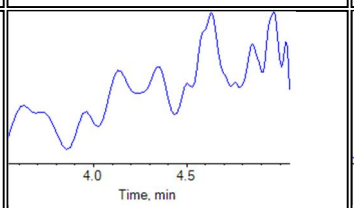
PFDoA_1



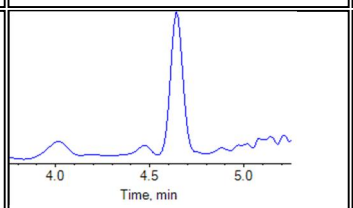
PFDoA_2



PFTrDA_1



PFTrDA_2



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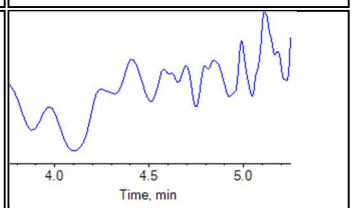

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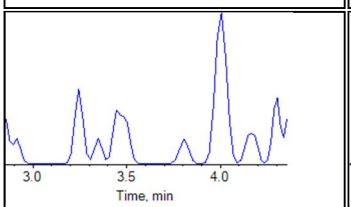
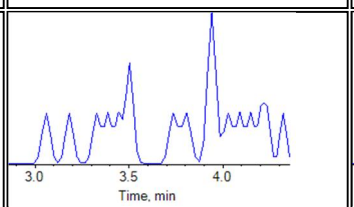
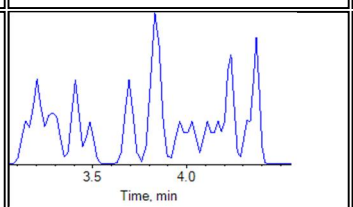


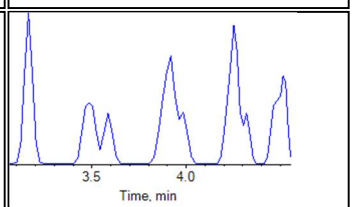
NMeFOSAA_1



NMeFOSAA_2

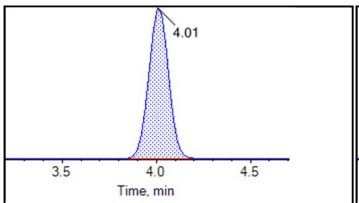


NEtFOSAA_1

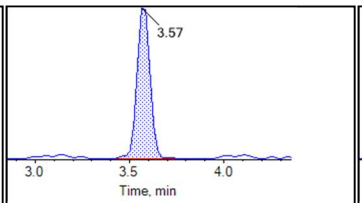


NEtFOSAA_2

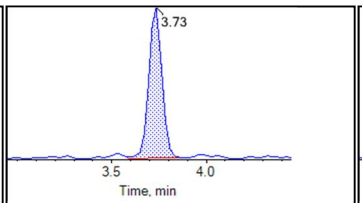
Internal Standards:



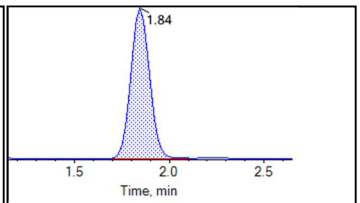
13C2-PFDoA



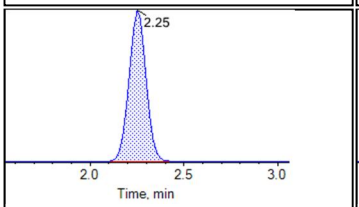
d3-MeFOSAA



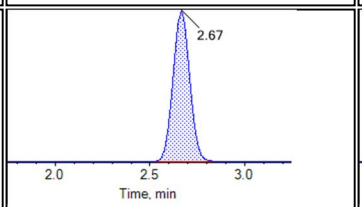
d5-EtFOSAA



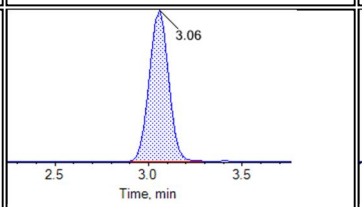
13C5-PFHxA



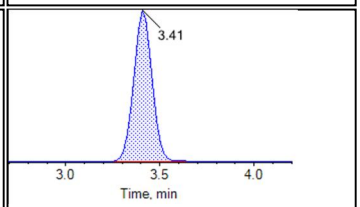
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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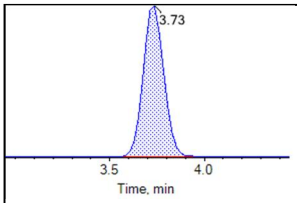
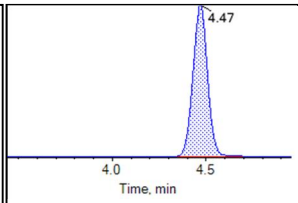
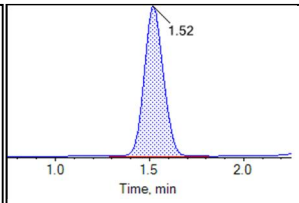


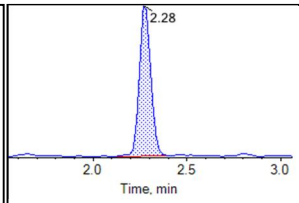
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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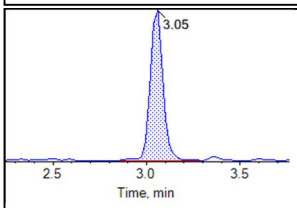

13C8-PFOS

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Chromatogram Report

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Printed: 24/10/2018 2:02:52 PM

Sample Name	J8671-FS(3)	**Injection Vial**	44
Sample ID	VC-CS10-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:47:42	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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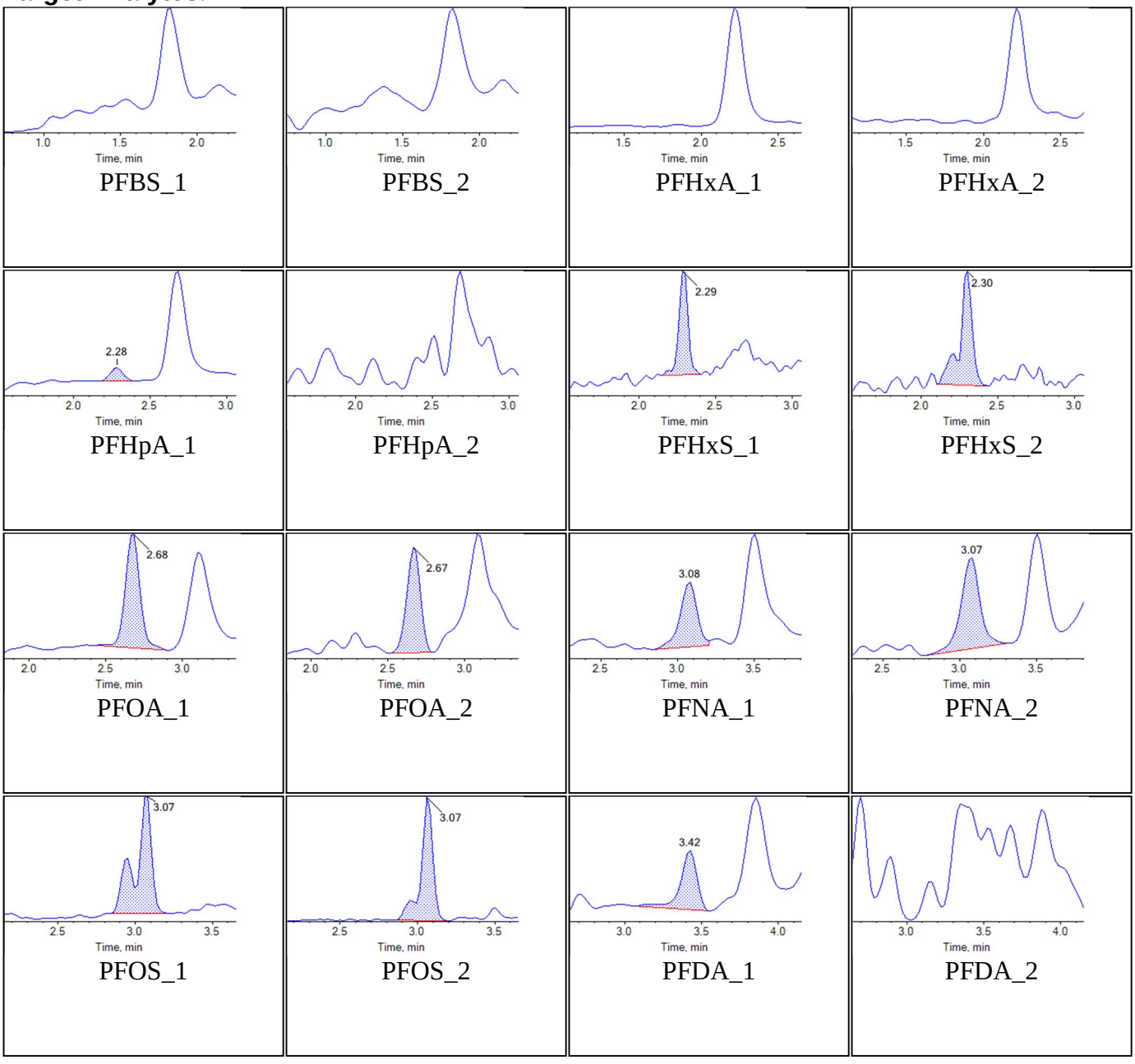

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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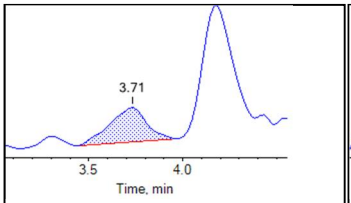
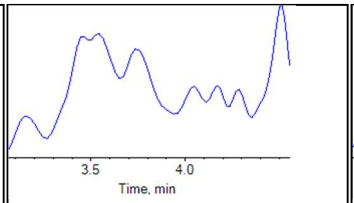
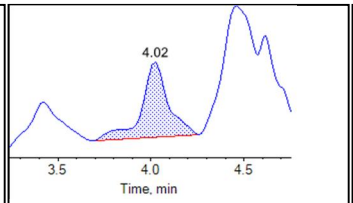


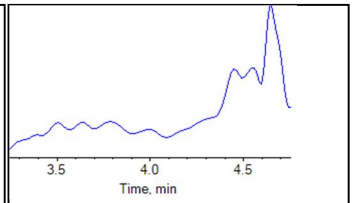
PFUnA_1



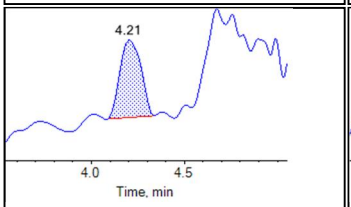
PFUnA_2



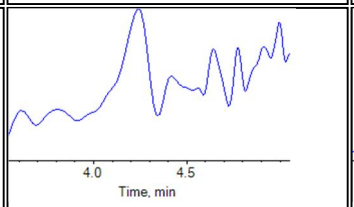
PFDoA_1



PFDoA_2



PFTrDA_1



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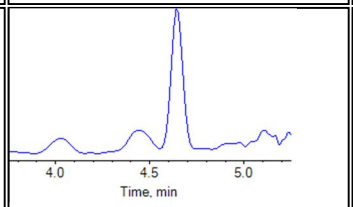
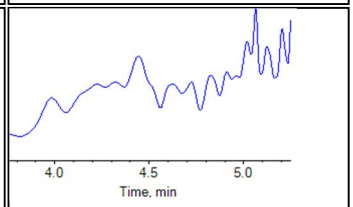


PFTeDA_1



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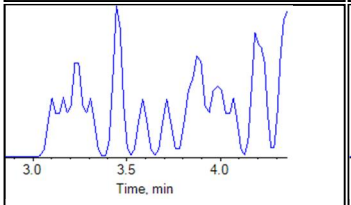

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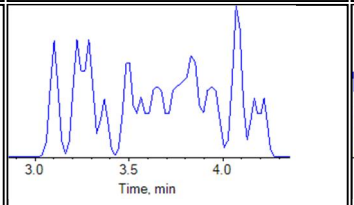

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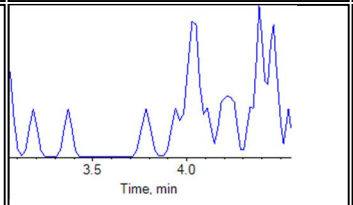
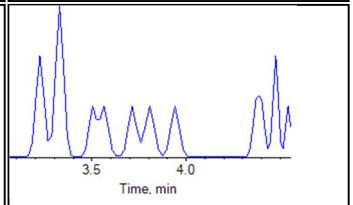
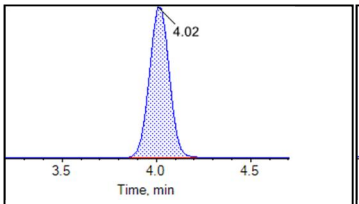


NEtFOSAA_1

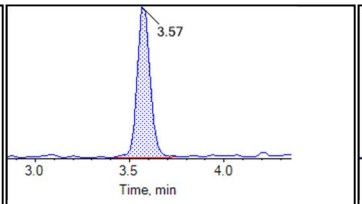


NEtFOSAA_2

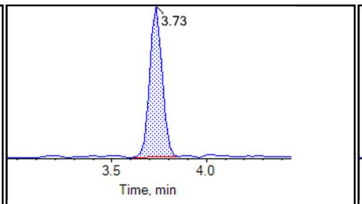
Internal Standards:



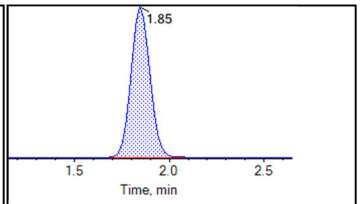
13C2-PFDoA



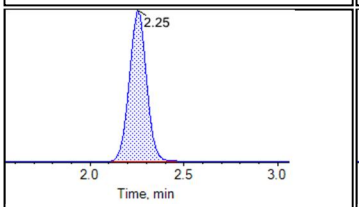
d3-MeFOSAA



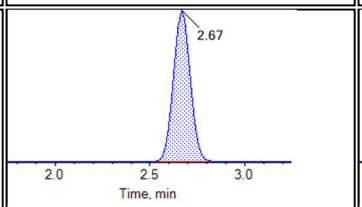
d5-EtFOSAA



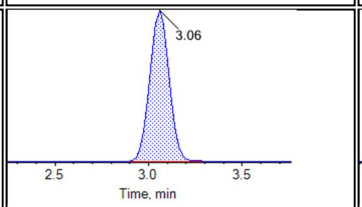
13C5-PFHxA



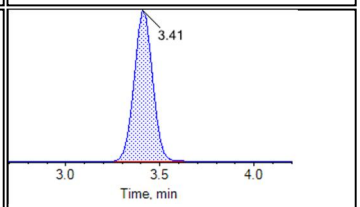
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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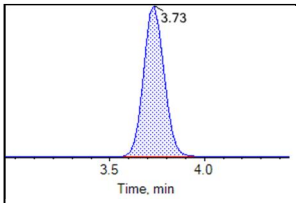
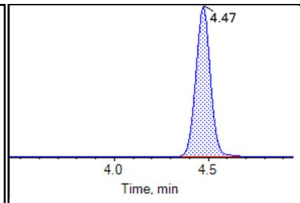
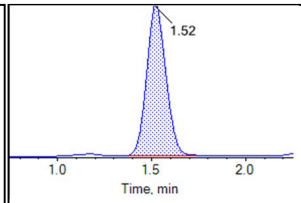


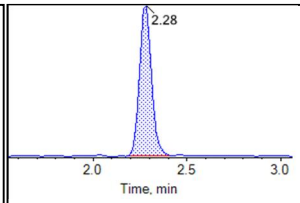
13C7-PFUnA



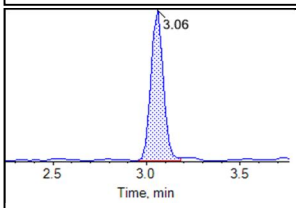
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	J8672-FS(3)	**Injection Vial**	45
Sample ID	VC-CS10-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:58:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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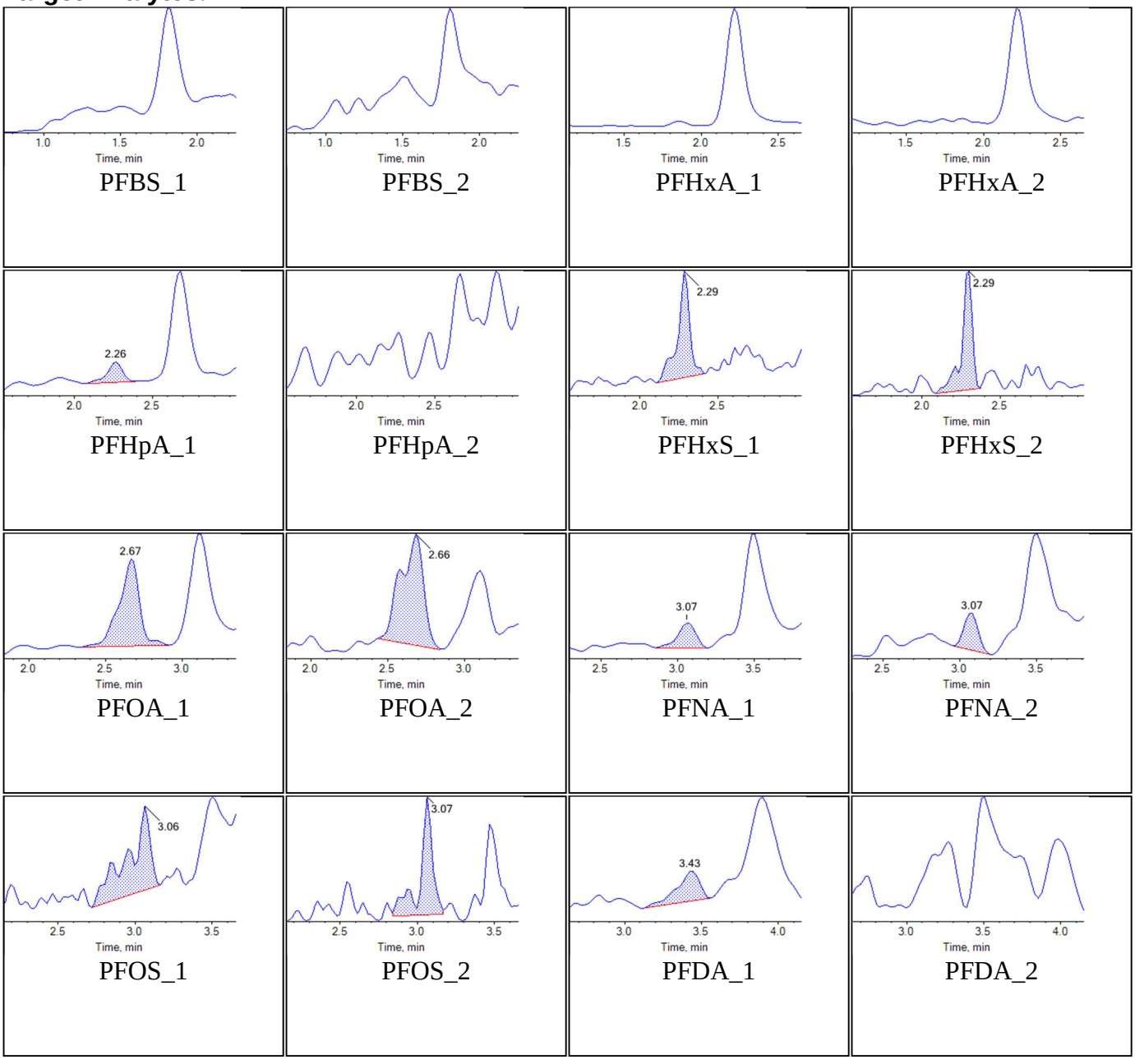
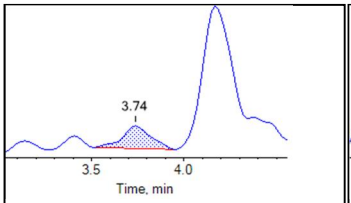


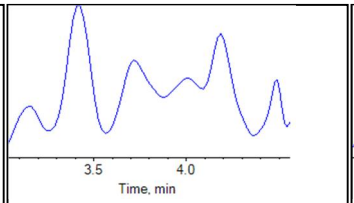
BATTELLE

Chromatogram Report

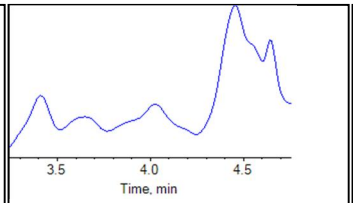
Created with Analyst Reporter
Printed: 24/10/2018 2:02:58 PM



PFUnA_1



PFUnA_2



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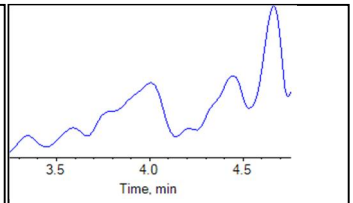
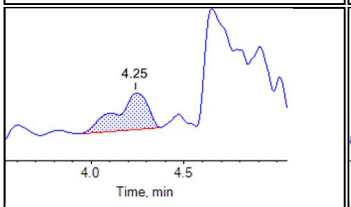
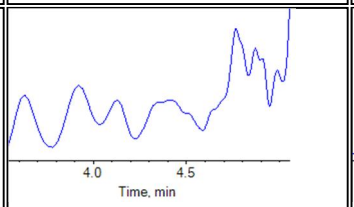


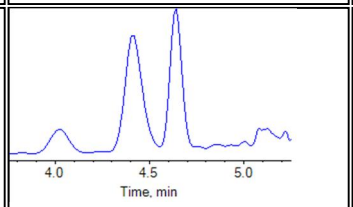
PFDoA_2



PFTrDA_1



PFTrDA_2



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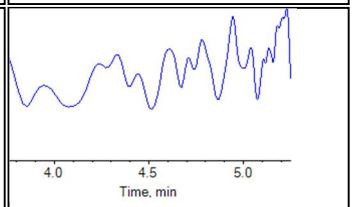

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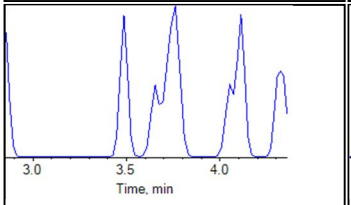
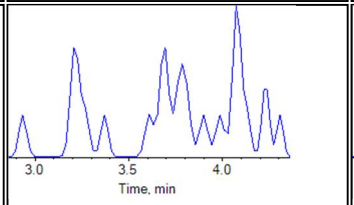
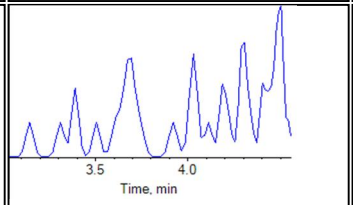


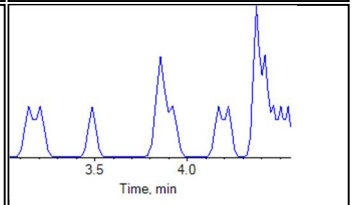
NMeFOSAA_1



NMeFOSAA_2

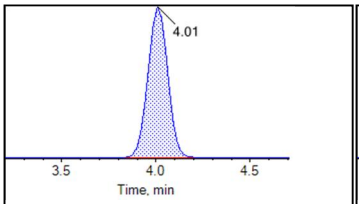


NEtFOSAA_1

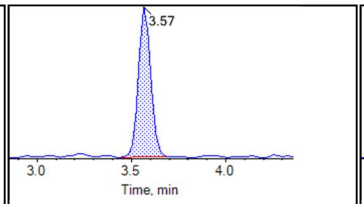


NEtFOSAA_2

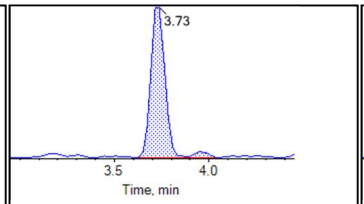
Internal Standards:



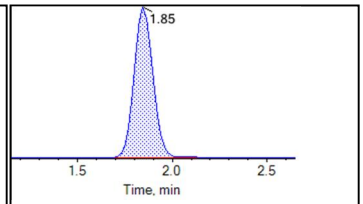
13C2-PFDoA



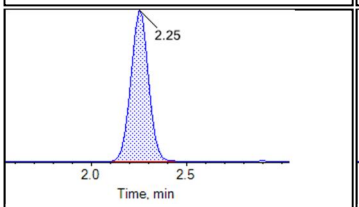
d3-MeFOSAA



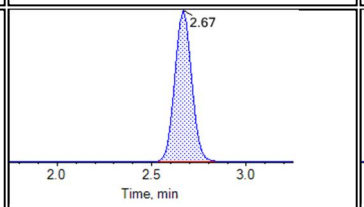
d5-EtFOSAA



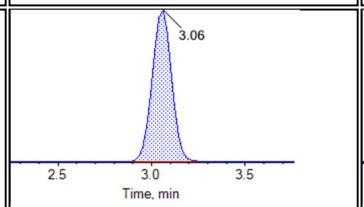
13C5-PFHxA



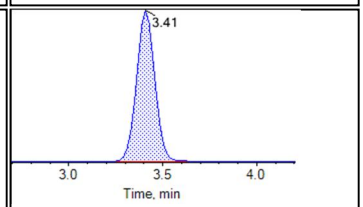
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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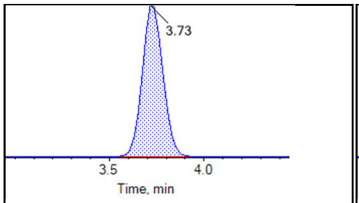
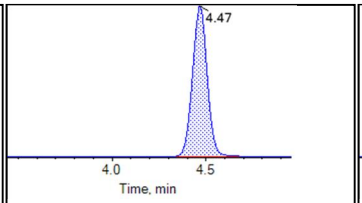
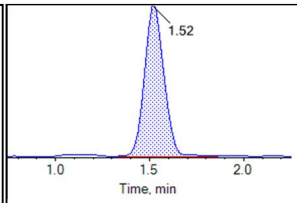


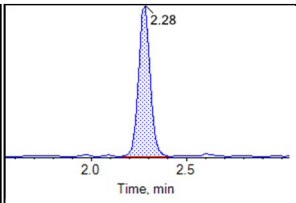
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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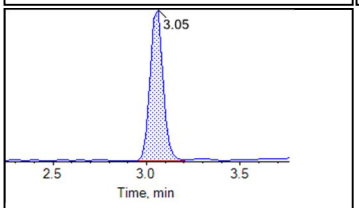

13C8-PFOS

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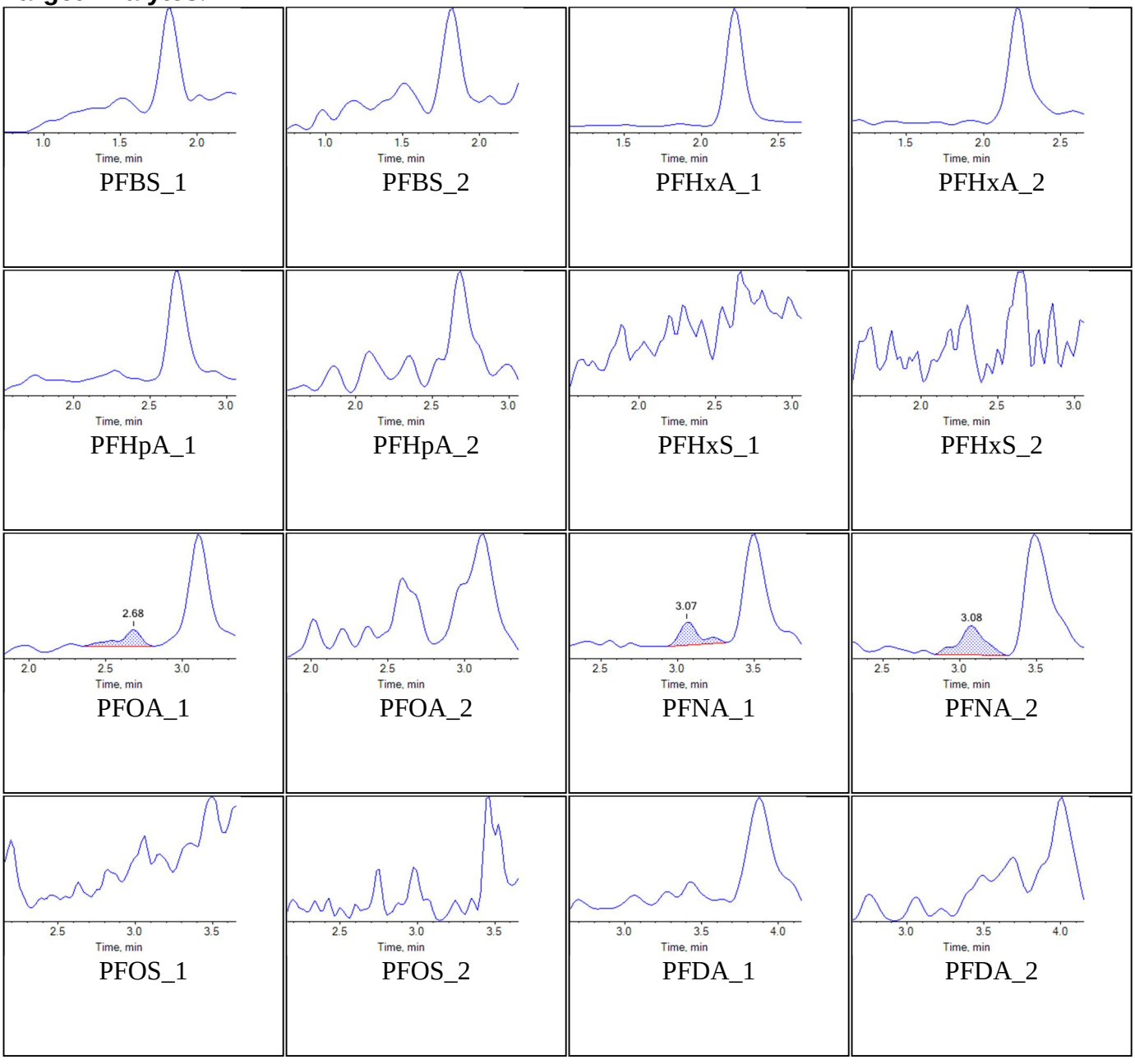
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:03:03 PM

Sample Name	J8673-FS(3)	**Injection Vial**	46
Sample ID	VC-CS10-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:09:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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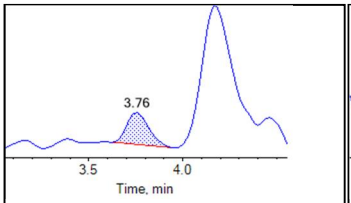
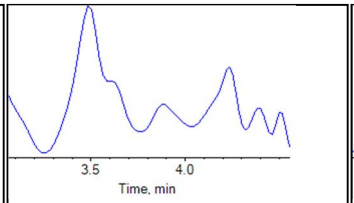
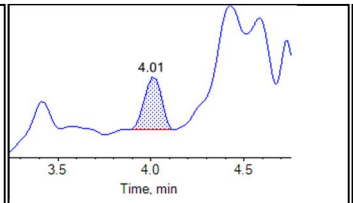


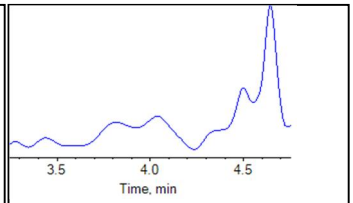
PFUnA_1



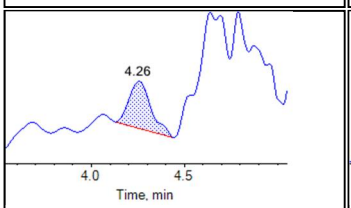
PFUnA_2



PFDoA_1



PFDoA_2



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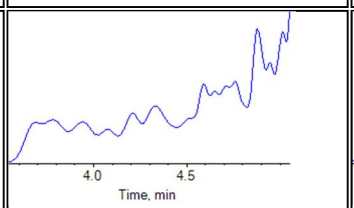

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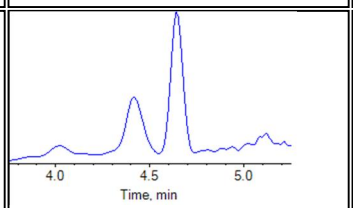

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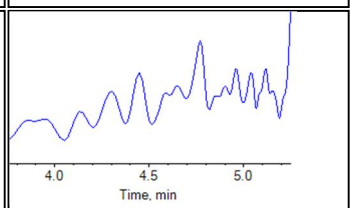
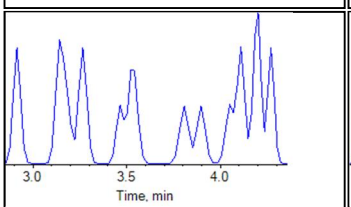


PFTeDA_2



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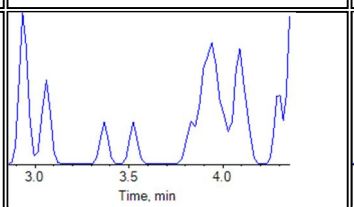

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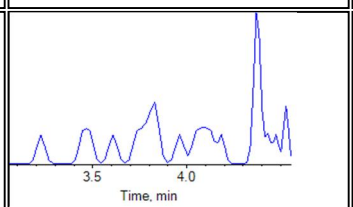
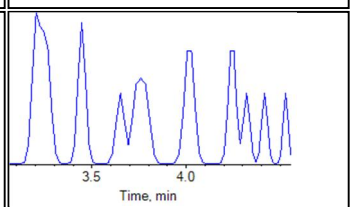
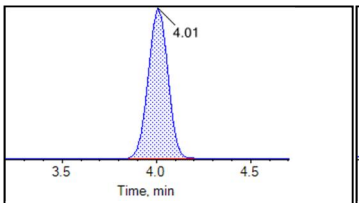


NEtFOSAA_1

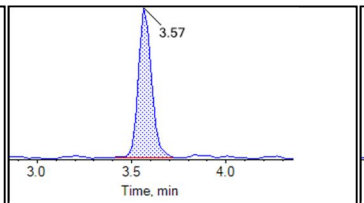


NEtFOSAA_2

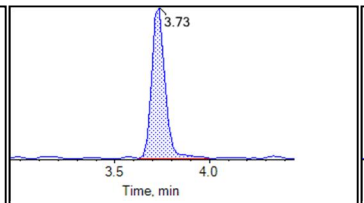
Internal Standards:



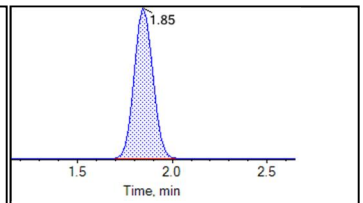
13C2-PFDoA



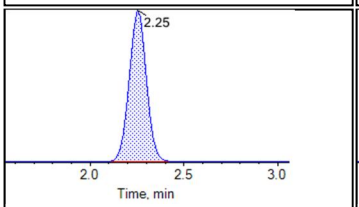
d3-MeFOSAA



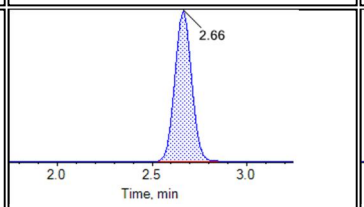
d5-EtFOSAA



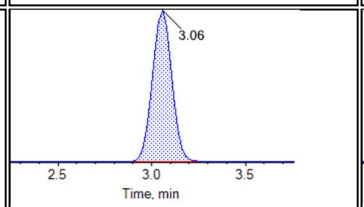
13C5-PFHxA



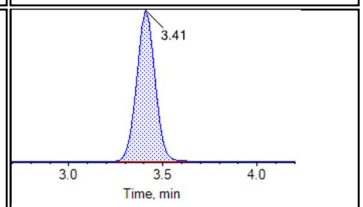
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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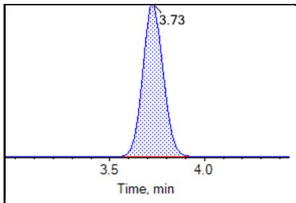
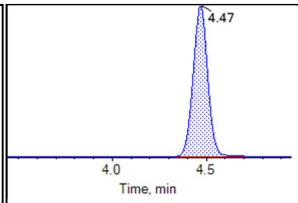
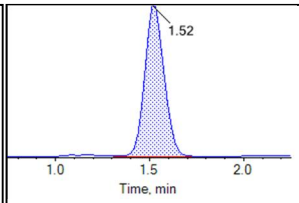


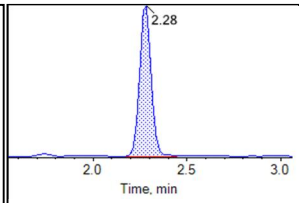
13C7-PFUnA



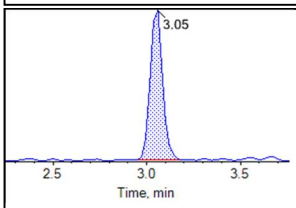
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:03:07 PM

Sample Name	J8674-FS(3)	**Injection Vial**	47
Sample ID	VC-CS10-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:20:16	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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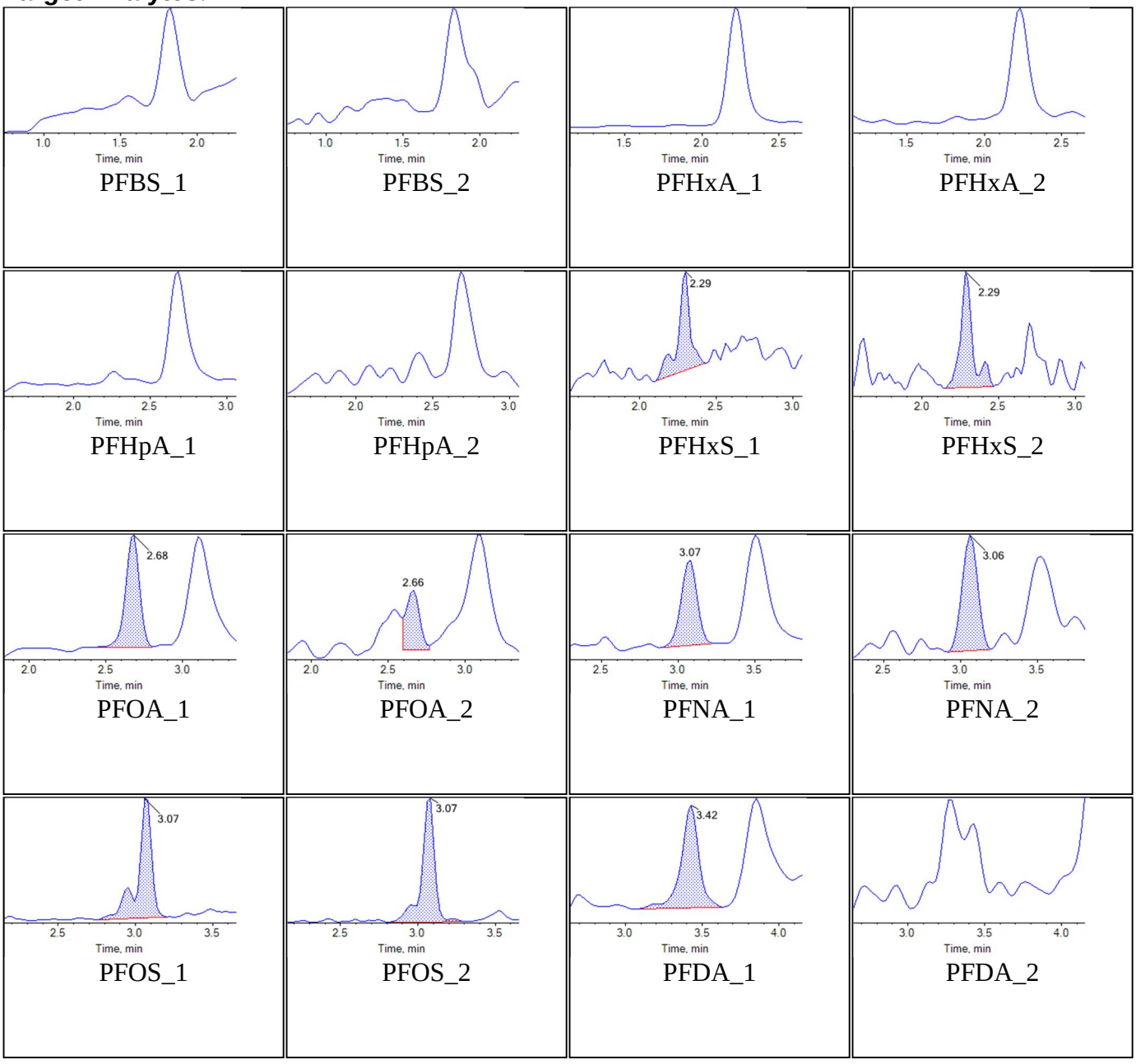
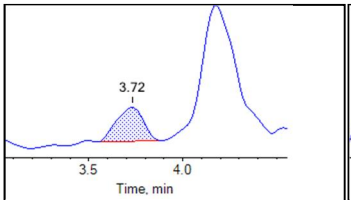


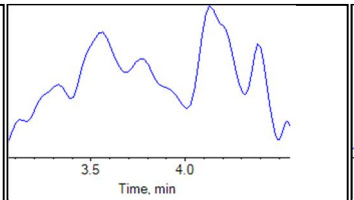
BATTELLE

Chromatogram Report

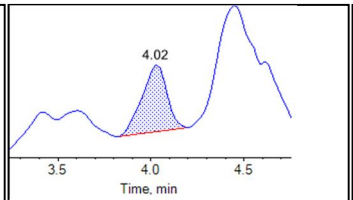
Created with Analyst Reporter
Printed: 24/10/2018 2:03:07 PM



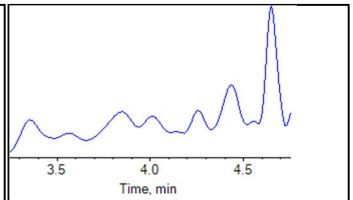
PFUnA_1



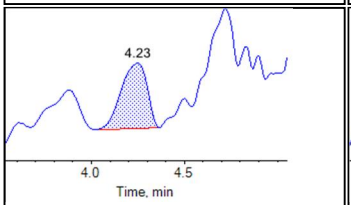
PFUnA_2



PFDoA_1



PFDoA_2



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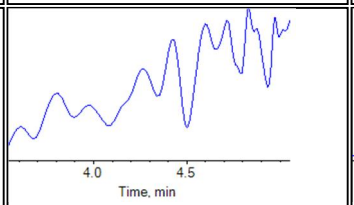
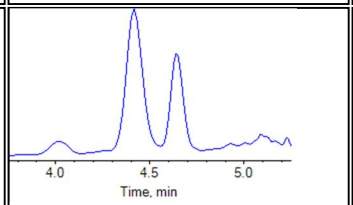


PFTrDA_2



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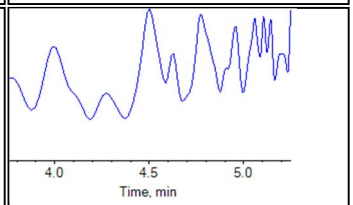

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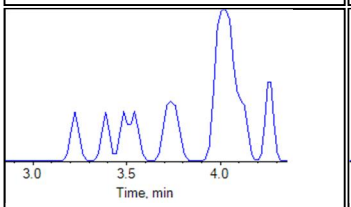
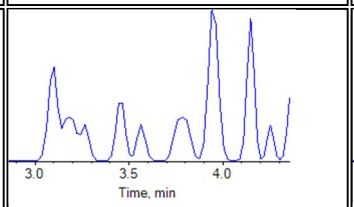
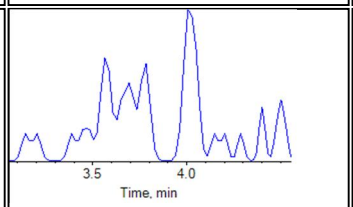


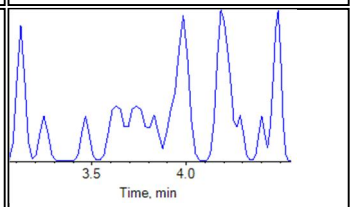
NMeFOSAA_1



NMeFOSAA_2

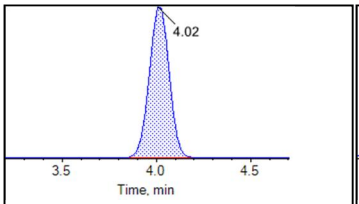


NEtFOSAA_1

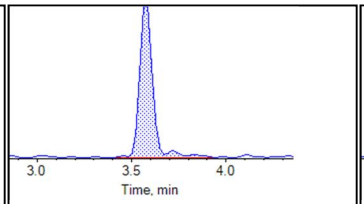


NEtFOSAA_2

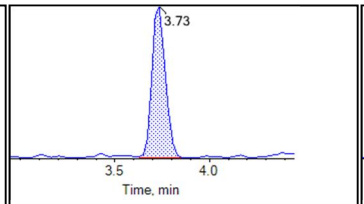
Internal Standards:



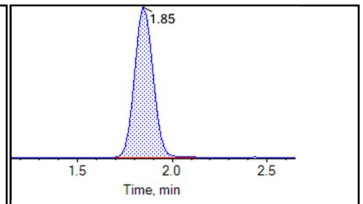
13C2-PFDoA



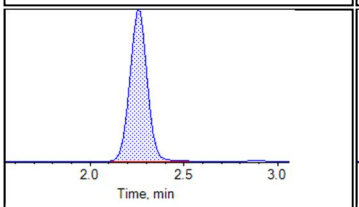
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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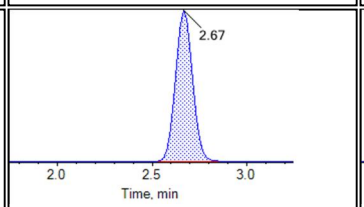
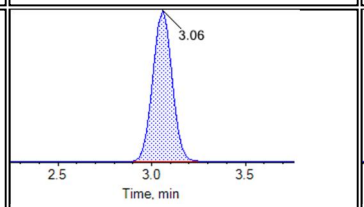
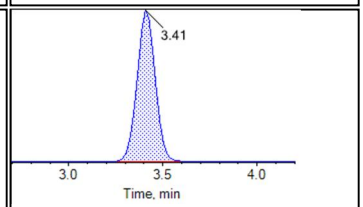


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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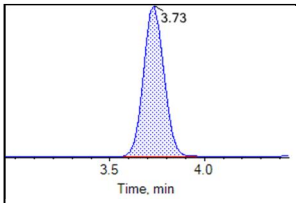
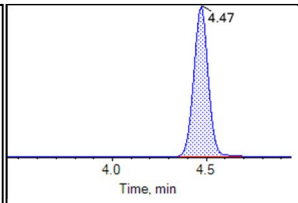
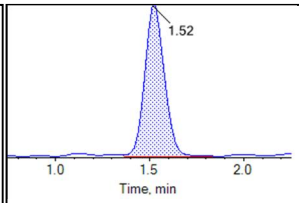


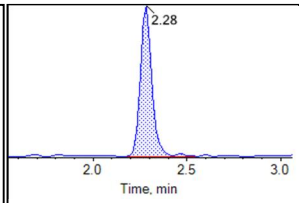
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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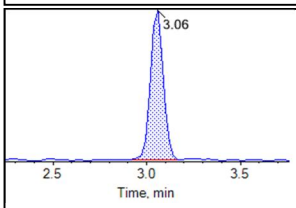

13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:03:12 PM

Sample Name	J8675-FS(3)	**Injection Vial**	48
Sample ID	VC-CS10-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:31:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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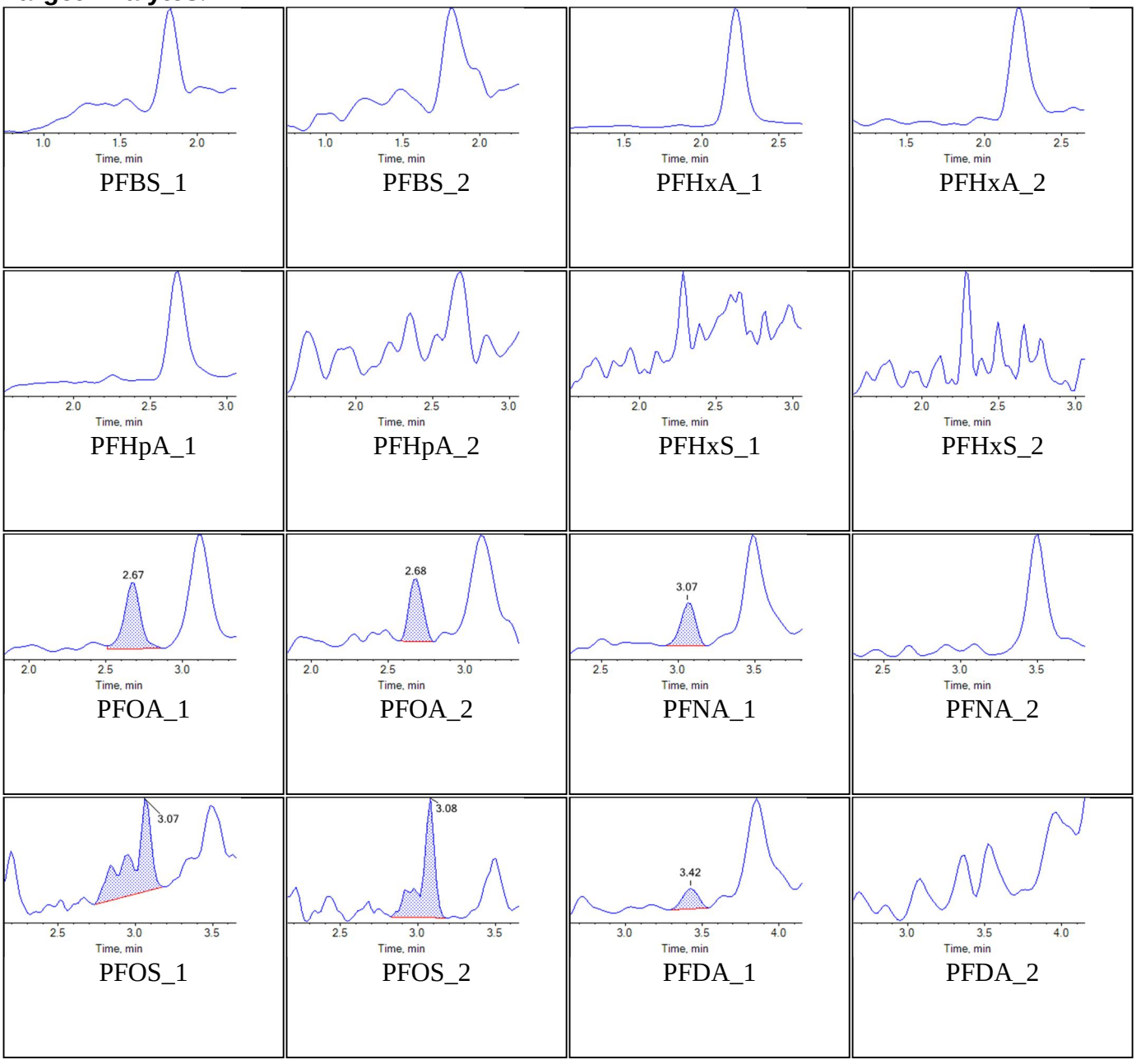
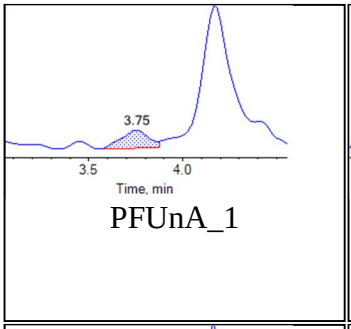


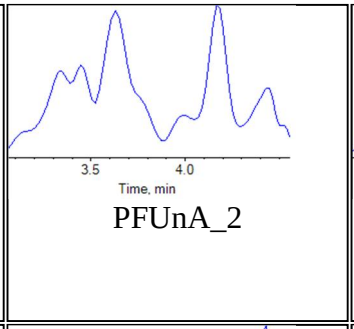
BATTELLE

Chromatogram Report

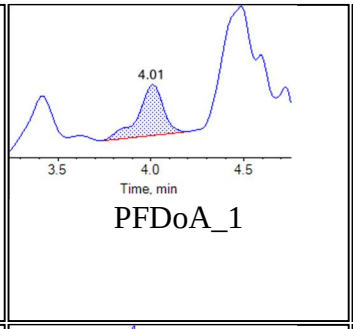
Created with Analyst Reporter
Printed: 24/10/2018 2:03:12 PM



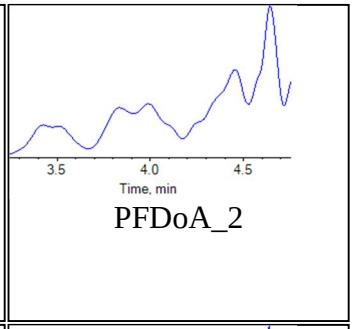
PFUnA_1



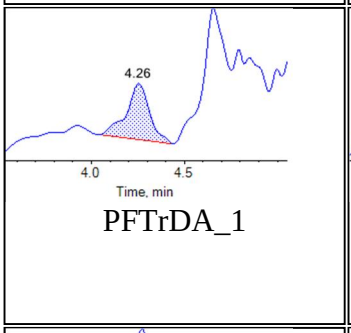
PFUnA_2



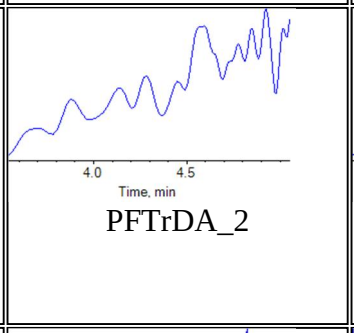
PFDoA_1



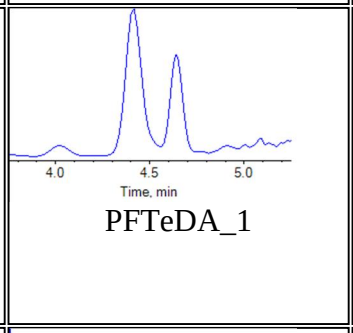
PFDoA_2



PFTrDA_1



PFTrDA_2



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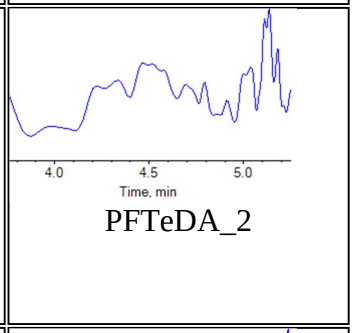
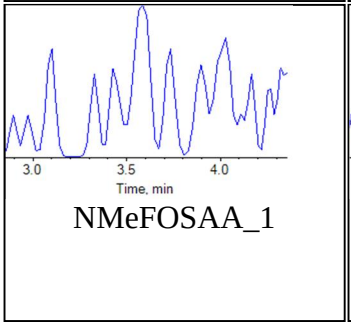
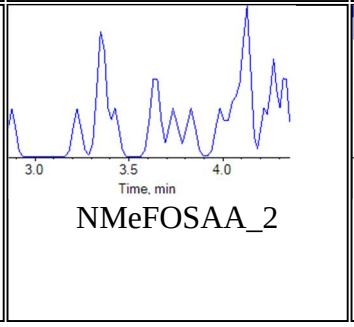


PFTeDA_2



NMeFOSAA_1



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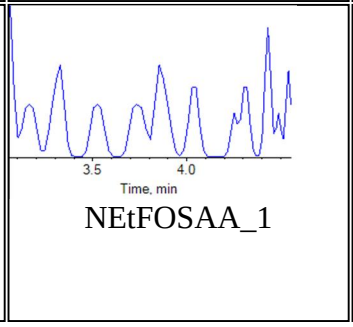
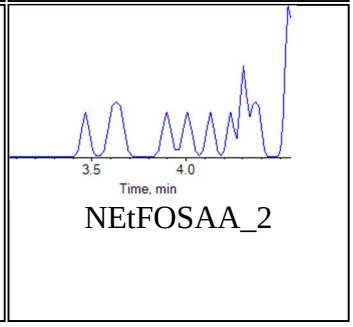
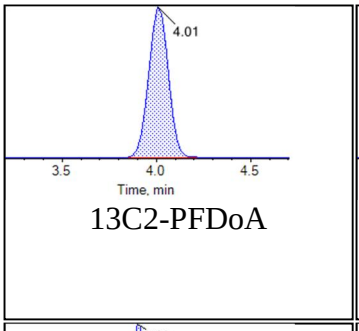


NEtFOSAA_1

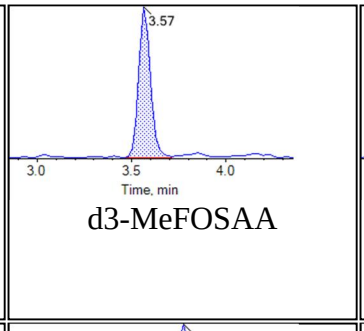


NEtFOSAA_2

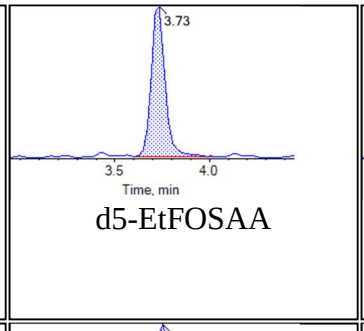
Internal Standards:



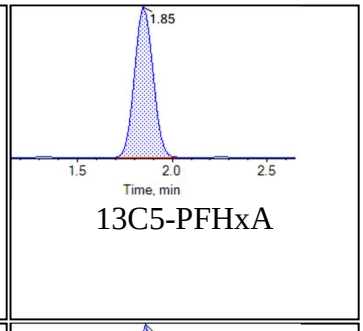
13C2-PFDoA



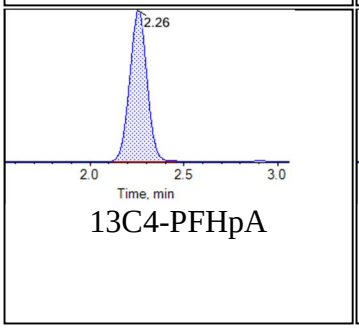
d3-MeFOSAA



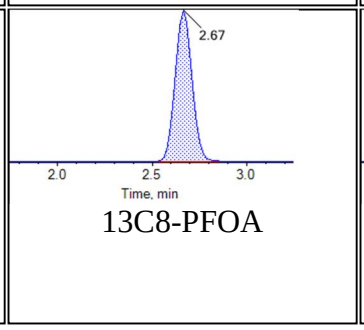
d5-EtFOSAA



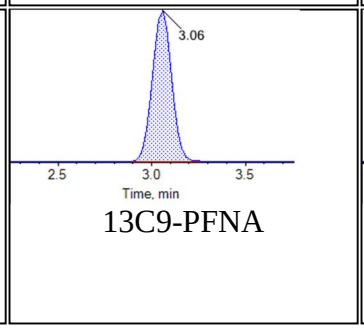
13C5-PFHxA



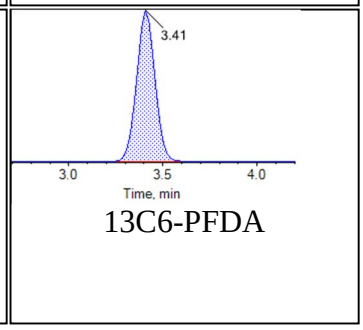
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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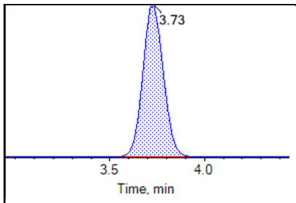
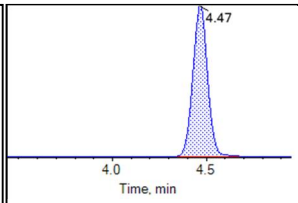
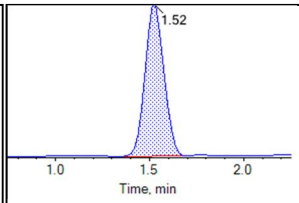


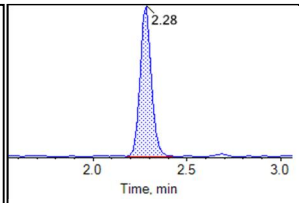
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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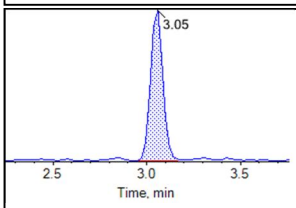

13C8-PFOS

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Chromatogram Report

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Sample Name	J8676-FS(3)	**Injection Vial**	49
Sample ID	VC-CS10-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:41:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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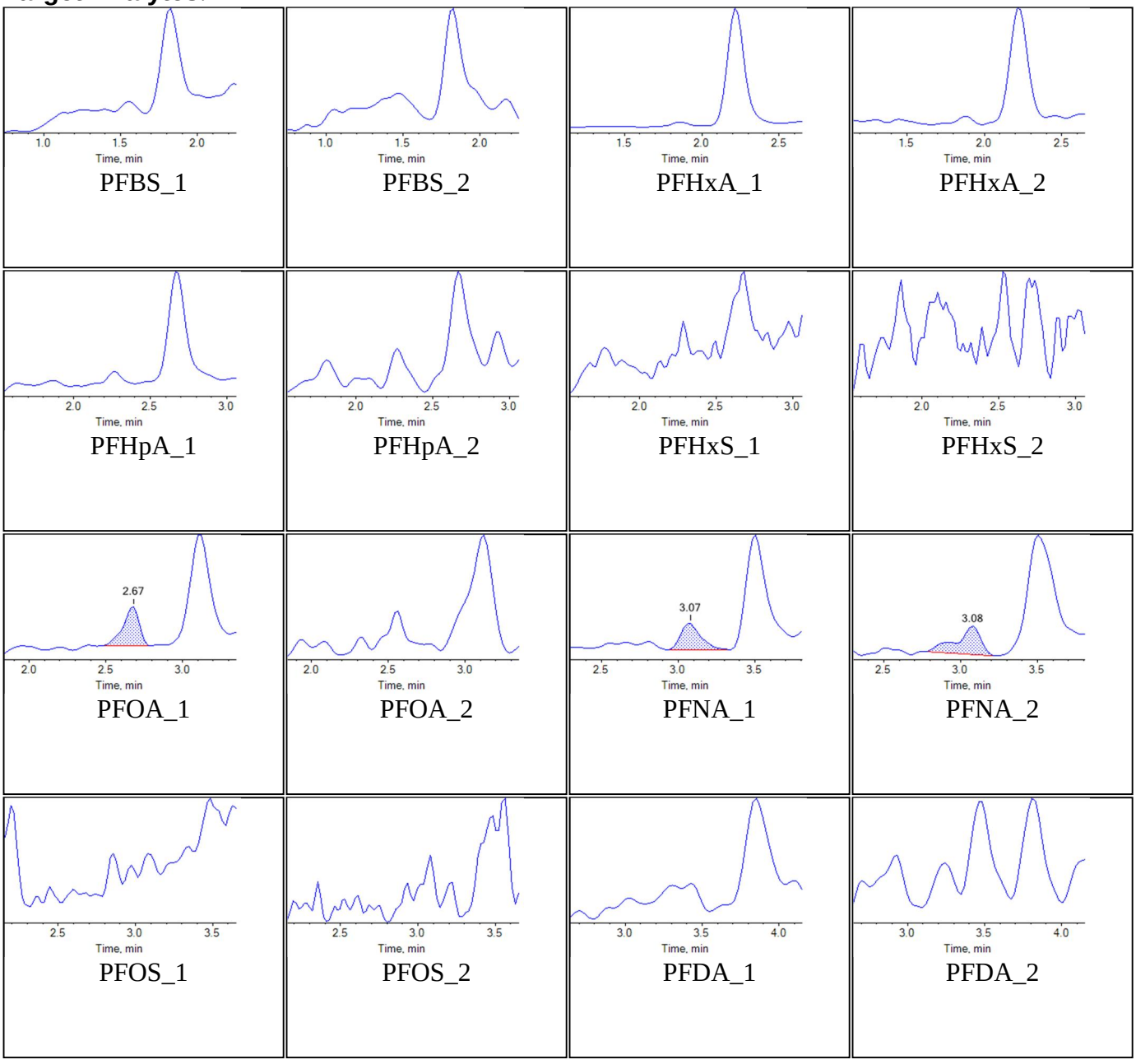

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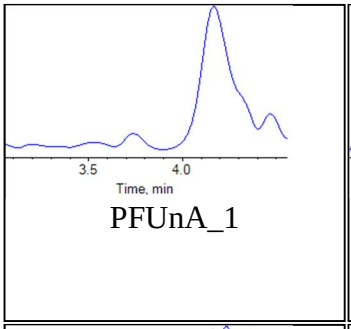
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:03:17 PM



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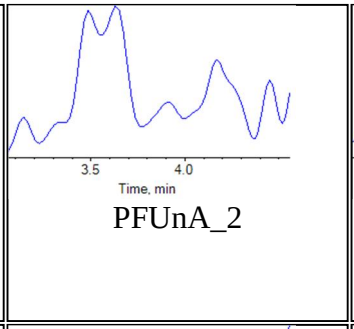

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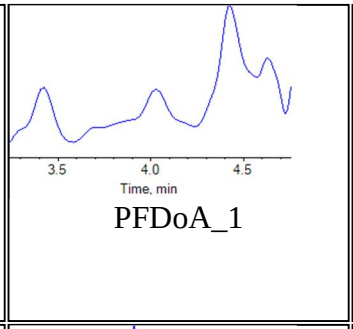

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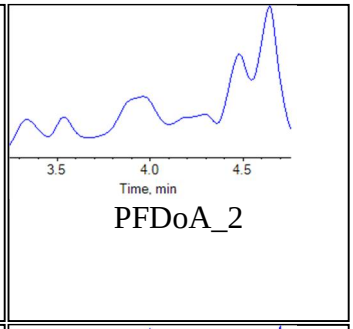

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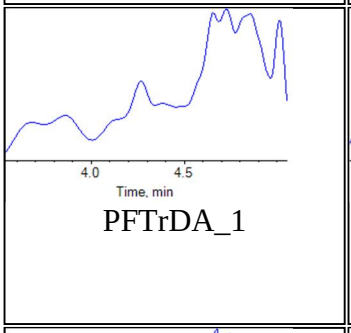

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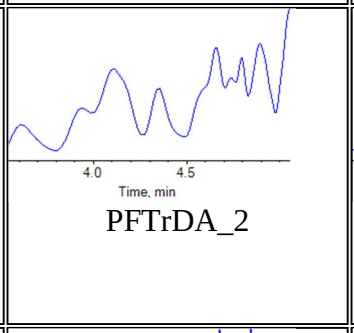

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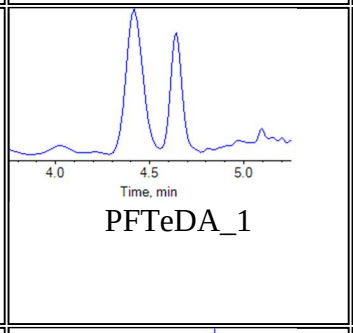

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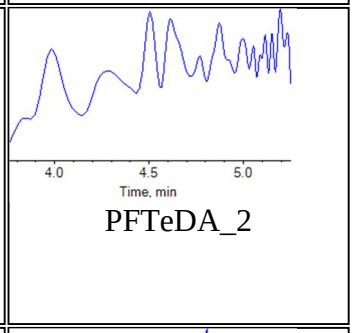

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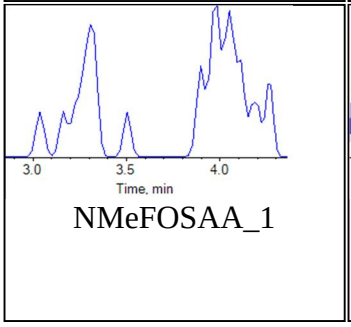

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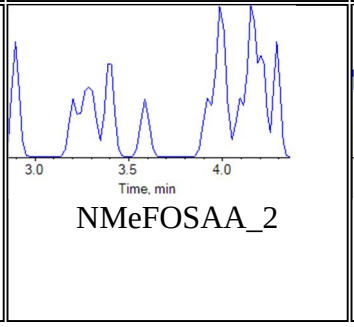

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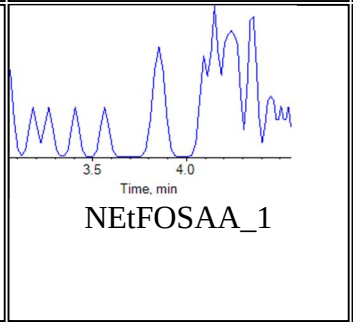

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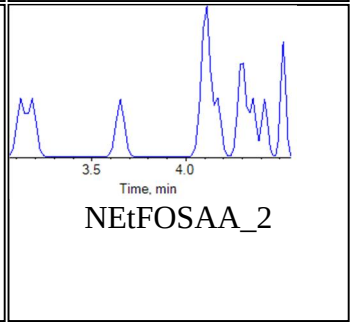
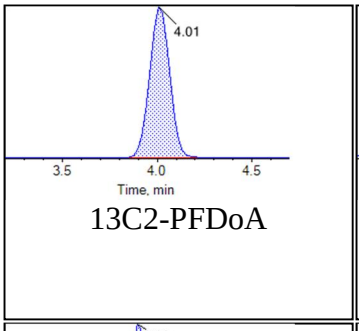
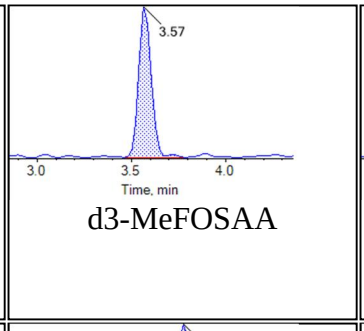


NEtFOSAA_2

Internal Standards:



13C2-PFDoA



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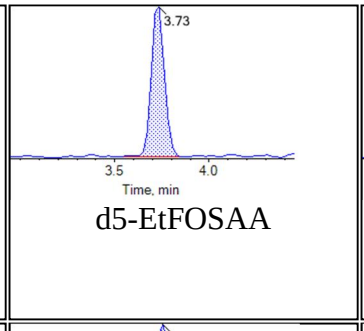
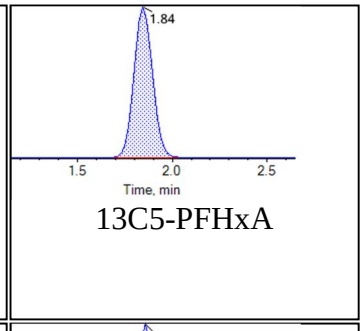


d5-EtFOSAA



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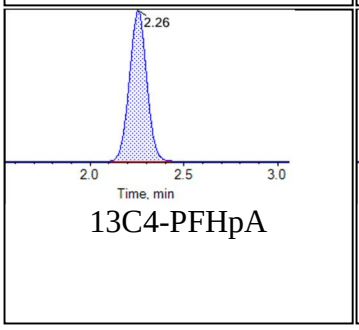

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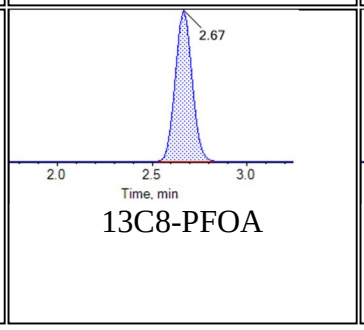

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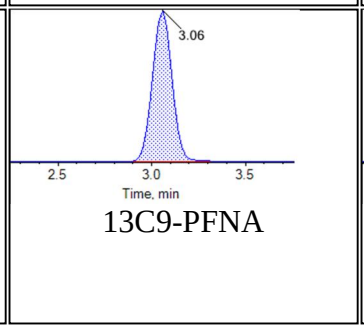
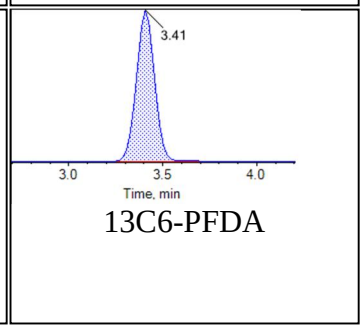


13C9-PFNA



13C6-PFDA

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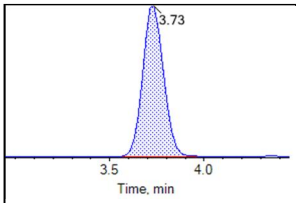

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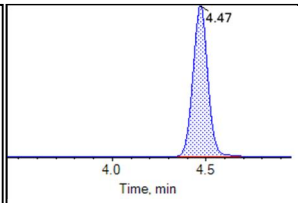
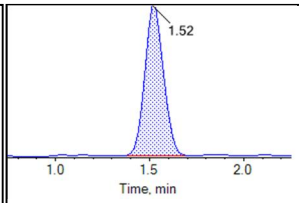
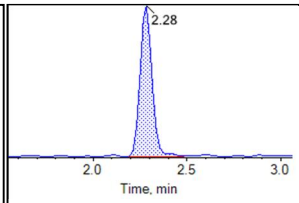


13C2-PFTeDA



13C3-PFBS



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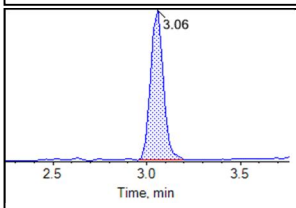

13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:03:22 PM

Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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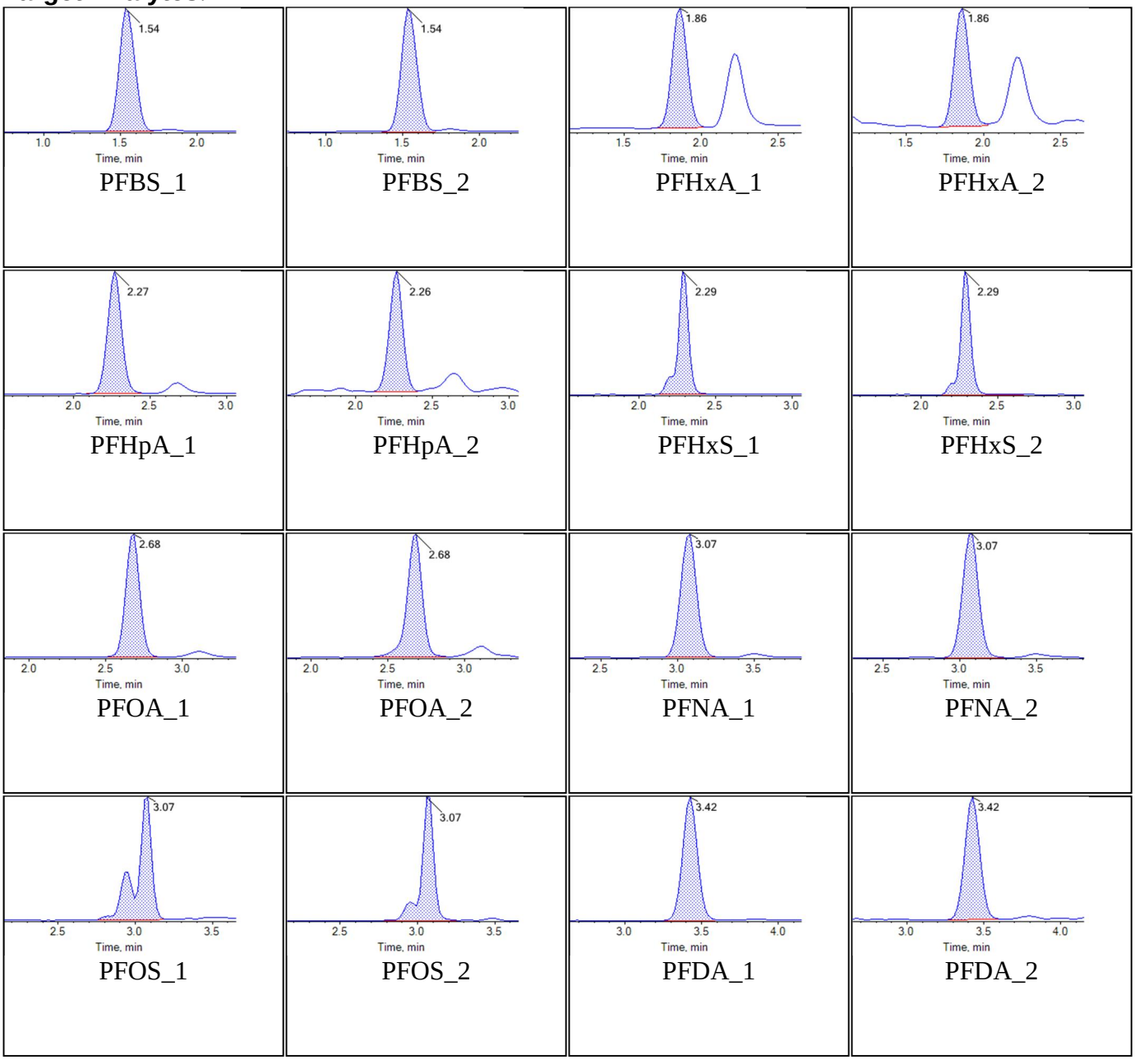

BATTELLE

Chromatogram Report

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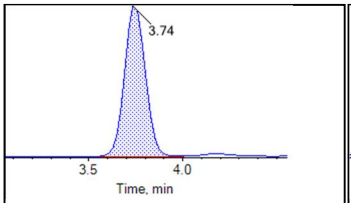

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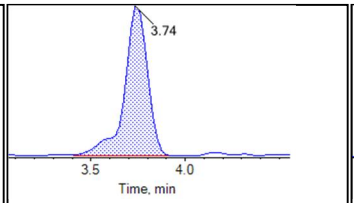

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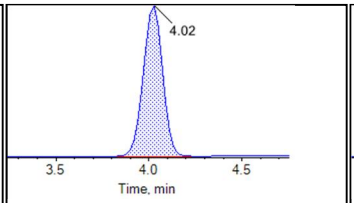
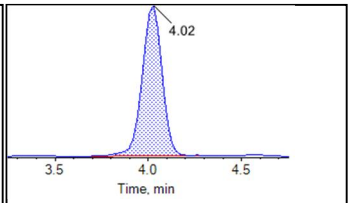


PFDoA_1



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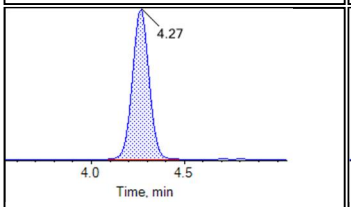

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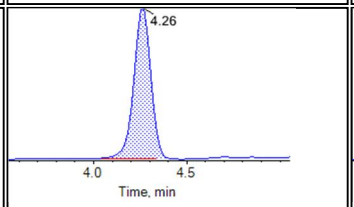

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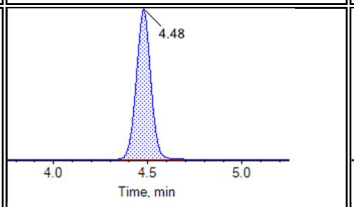

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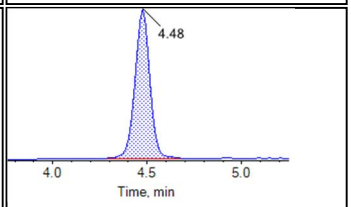

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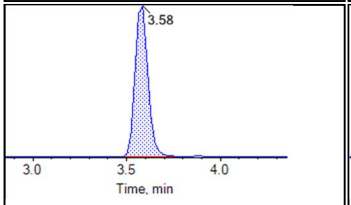

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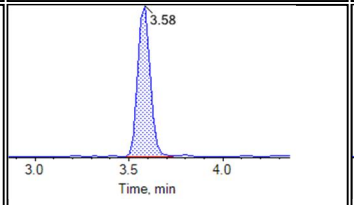

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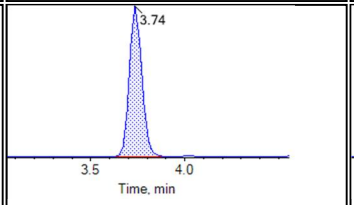

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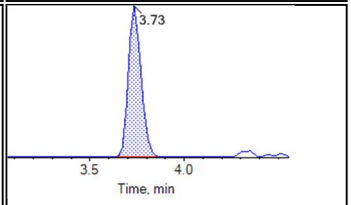
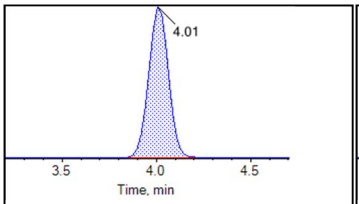


NEtFOSAA_2

Internal Standards:



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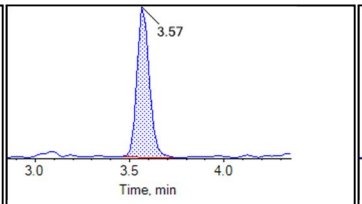
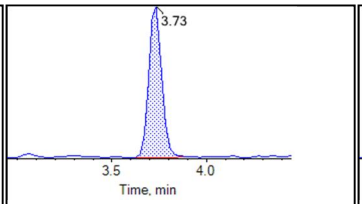
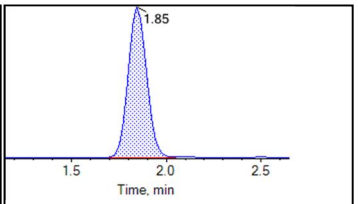


d3-MeFOSAA



d5-EtFOSAA



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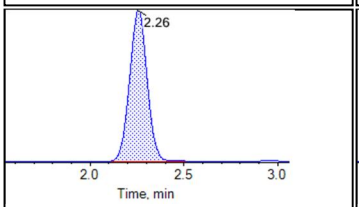

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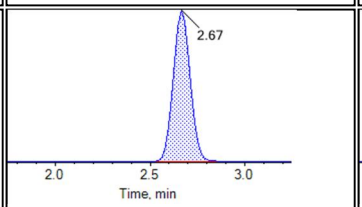

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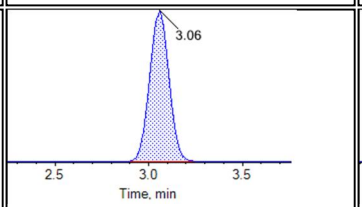

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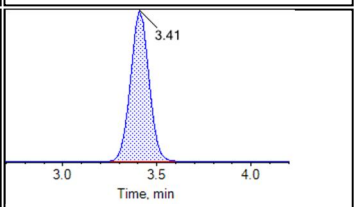

13C6-PFDA

BATTELLE

Chromatogram Report

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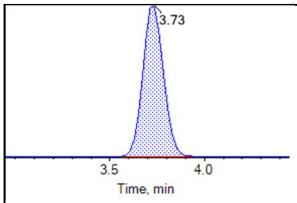
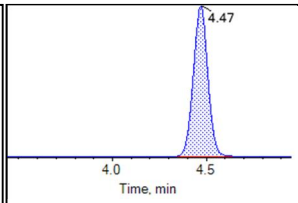
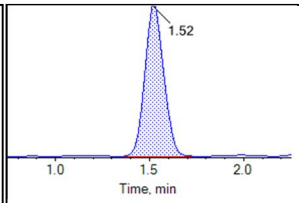


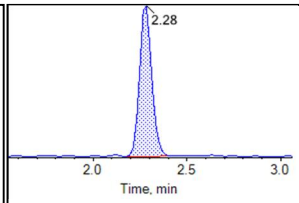
13C7-PFUnA



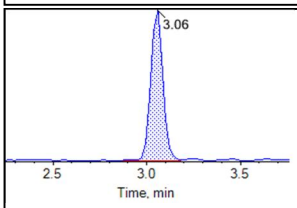
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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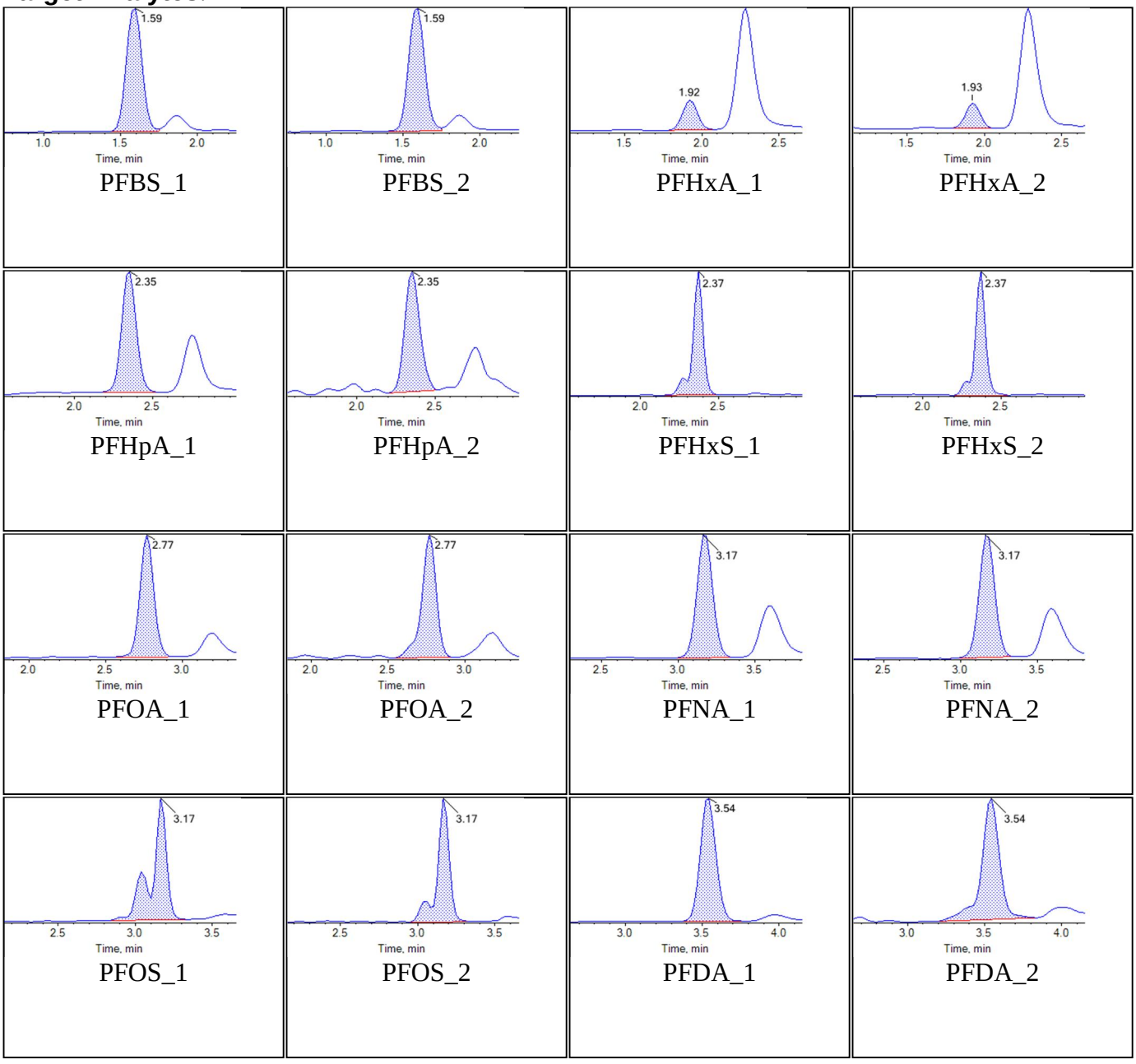

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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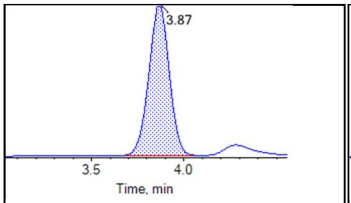

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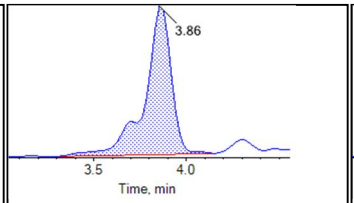

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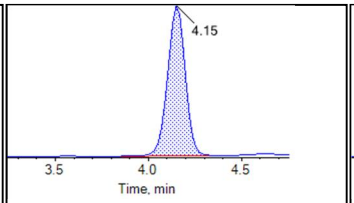

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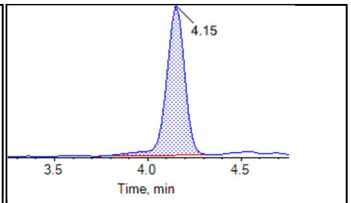

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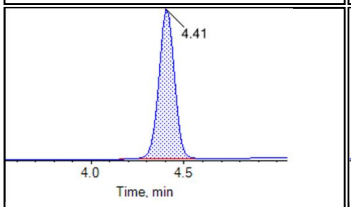
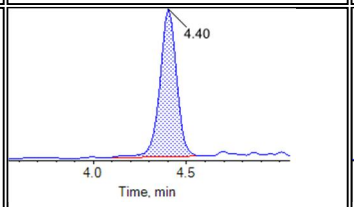


PFTrDA_1



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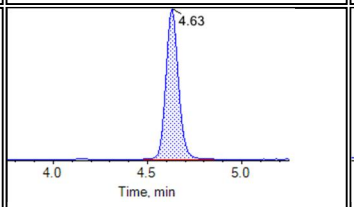

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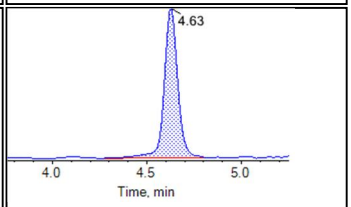

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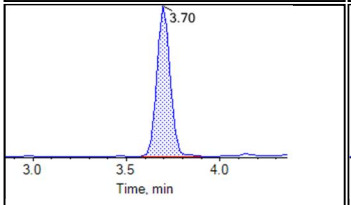

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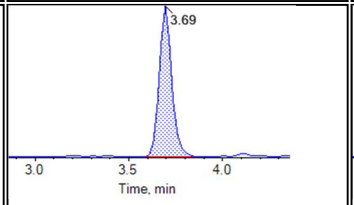

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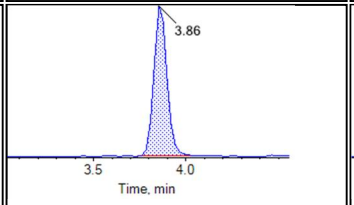

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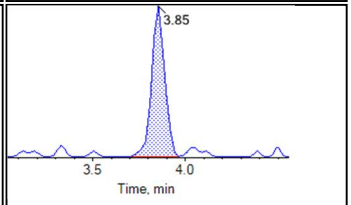
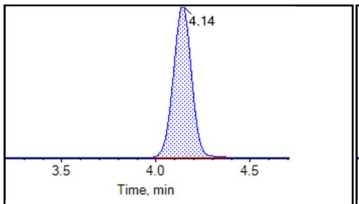
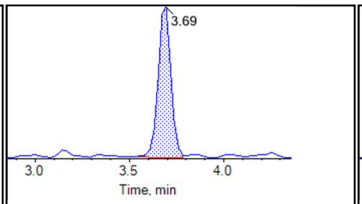


NEtFOSAA_2

Internal Standards:



13C2-PFDoA



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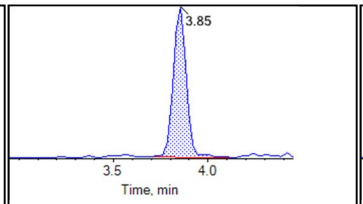
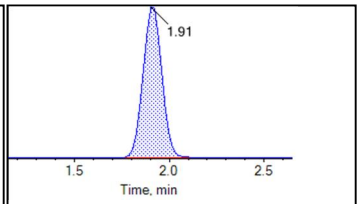
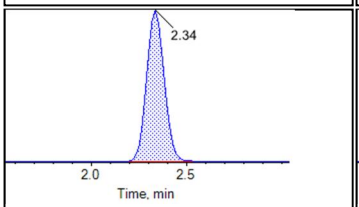


d5-EtFOSAA



13C5-PFHxA



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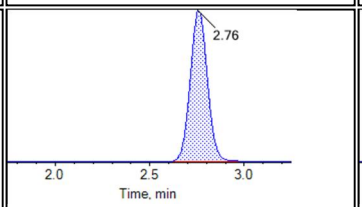

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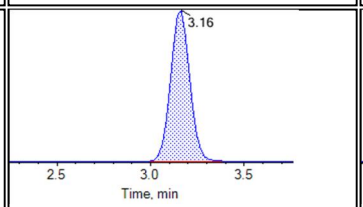

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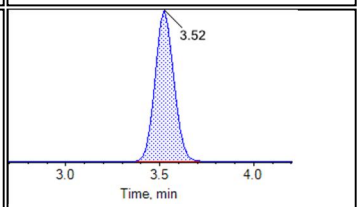

13C6-PFDA

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Chromatogram Report

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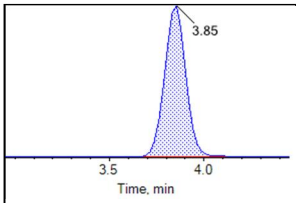

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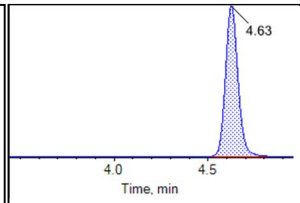

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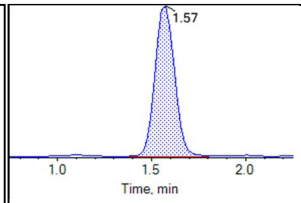

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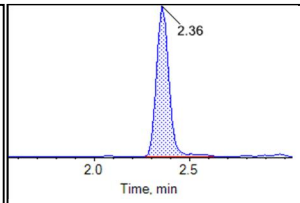

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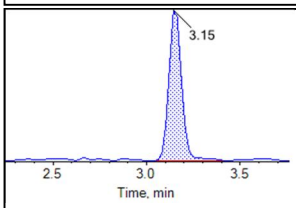

13C8-PFOS

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Chromatogram Report

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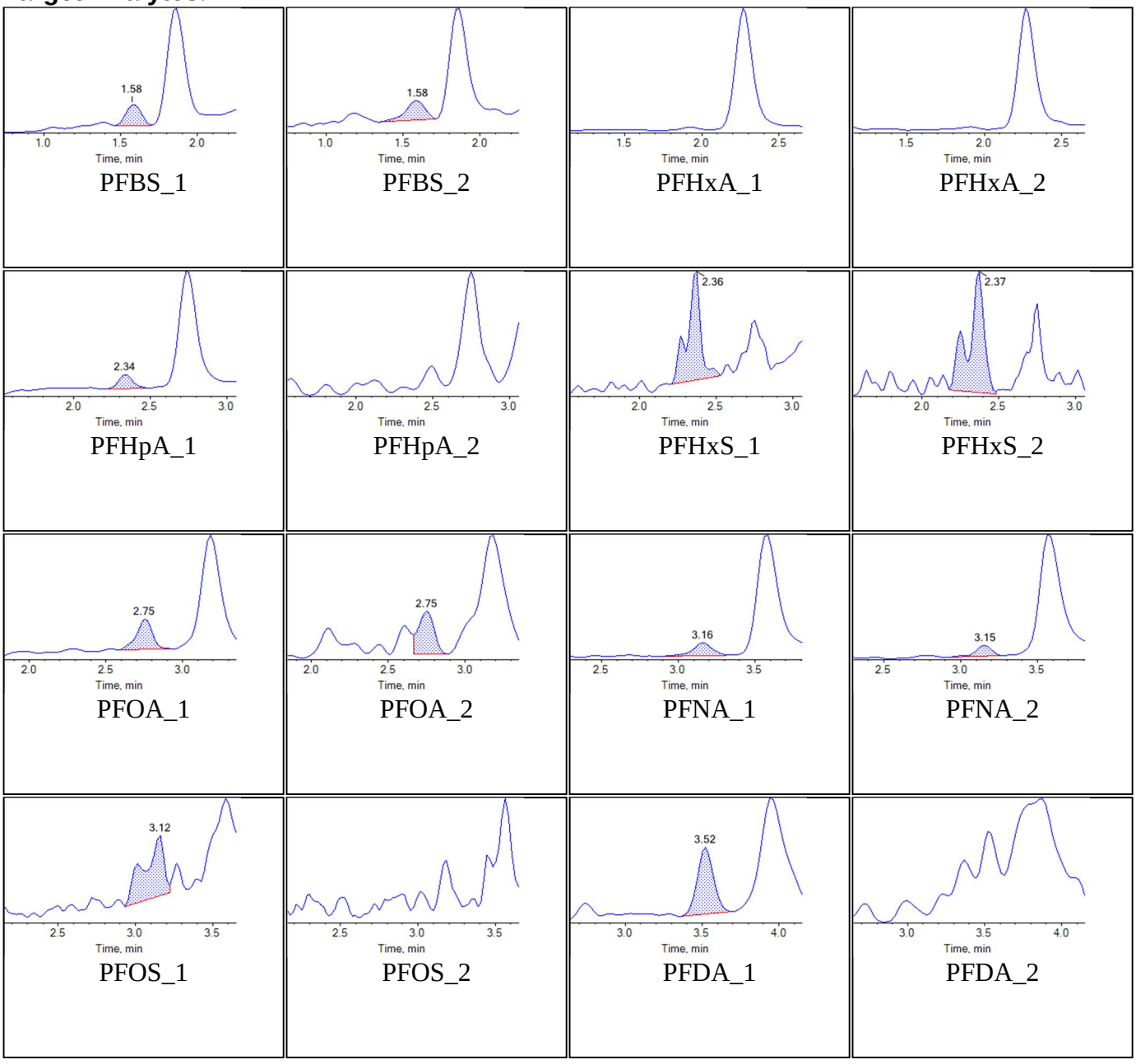
Printed: 24/10/2018 2:05:45 PM

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T19:43:39	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

Target Analytes:



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Chromatogram Report

Created with Analyst Reporter
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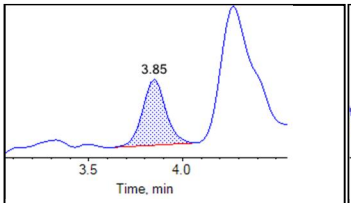

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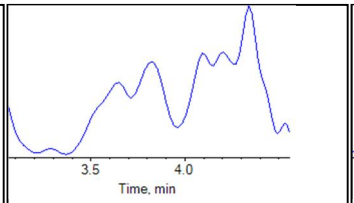

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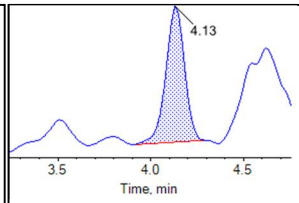

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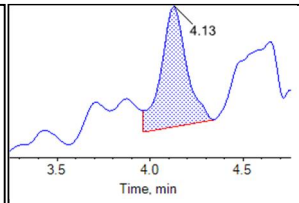
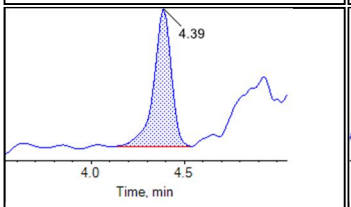
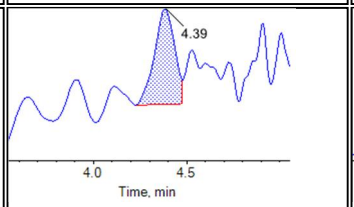


PFDoA_2



PFTrDA_1



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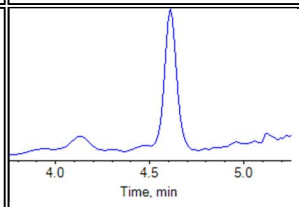

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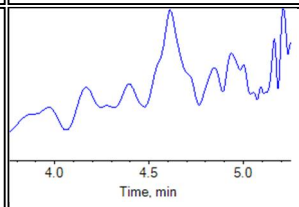

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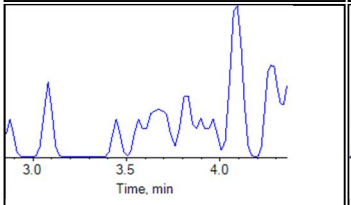

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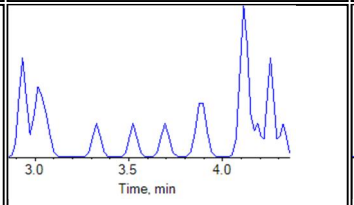

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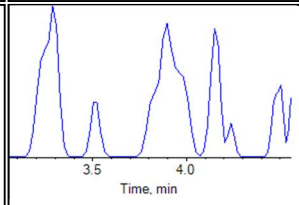

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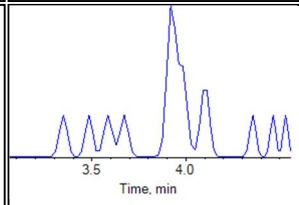
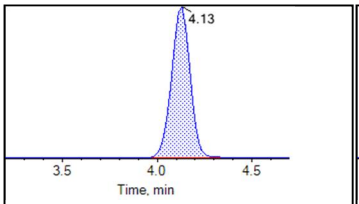
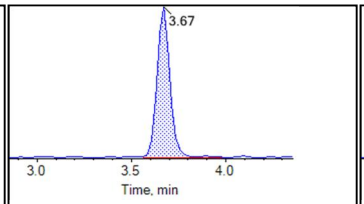


NEtFOSAA_2

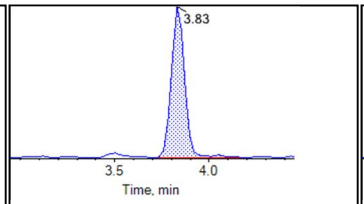
Internal Standards:



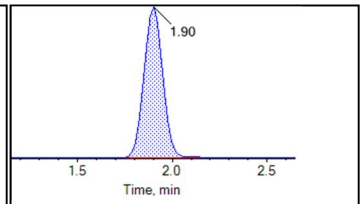
13C2-PFDoA



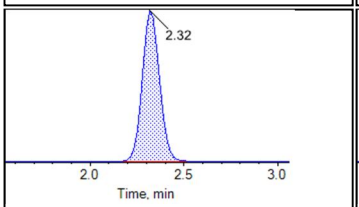
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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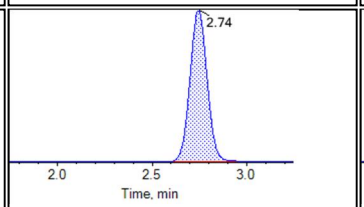
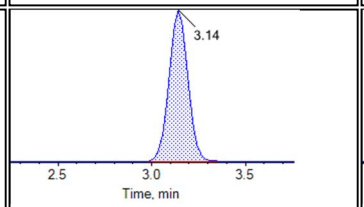
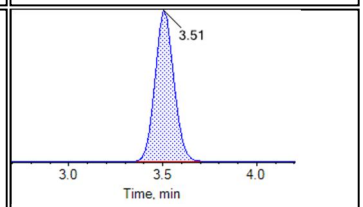


13C8-PFOA



13C9-PFNA



13C6-PFDA

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Chromatogram Report

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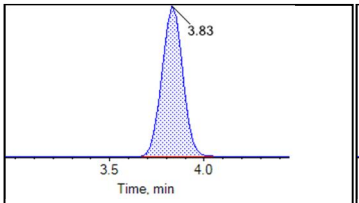
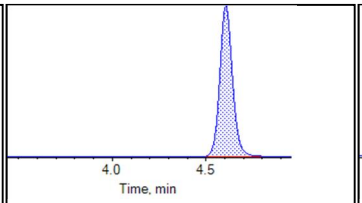
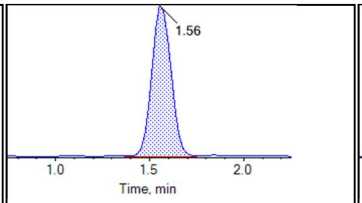


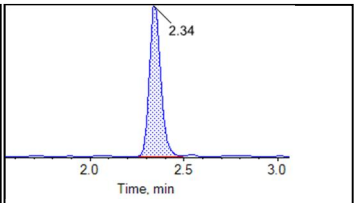
13C7-PFUnA



13C2-PFTeDA



13C3-PFBS



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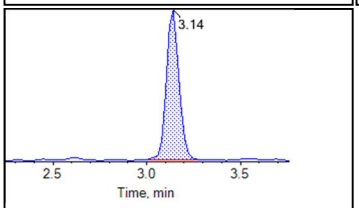

13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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Sample Name	J8665-FS(3)	**Injection Vial**	5
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T20:16:16	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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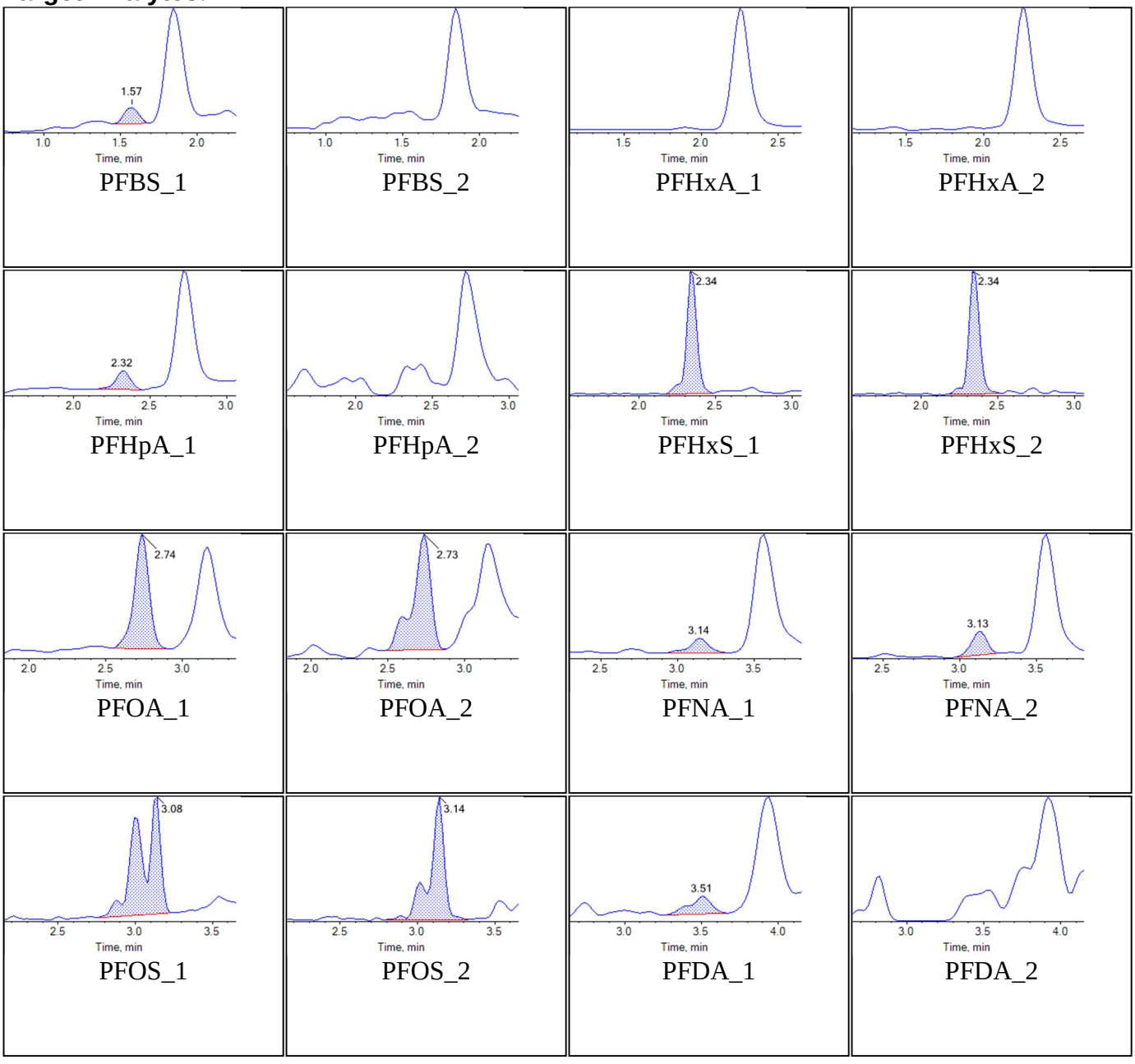
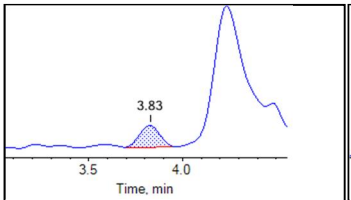


BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:05:57 PM



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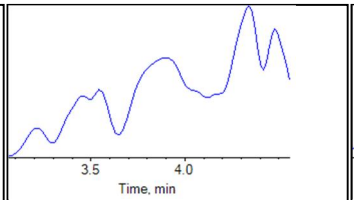

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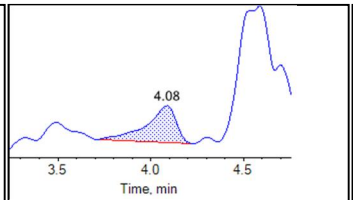

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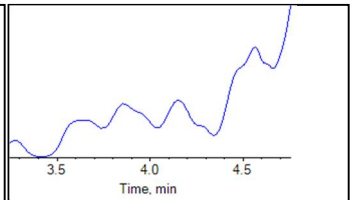

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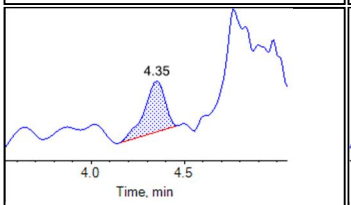

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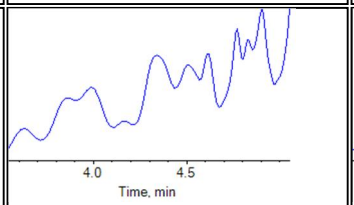

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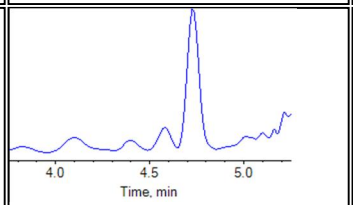

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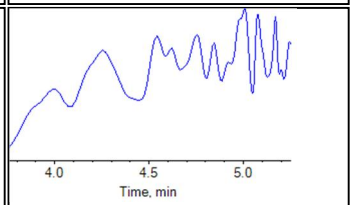

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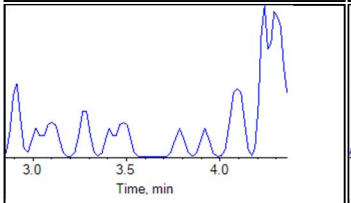

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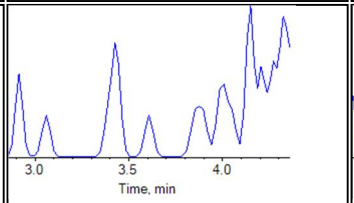

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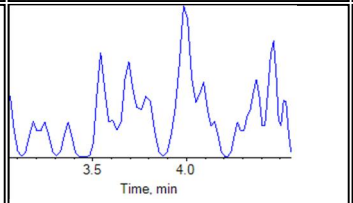
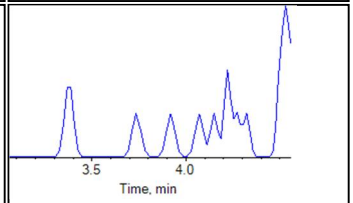
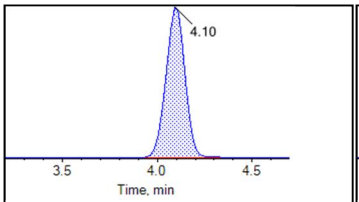


NEtFOSAA_1

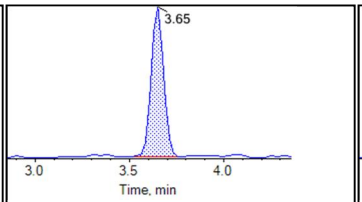


NEtFOSAA_2

Internal Standards:



13C2-PFDoA



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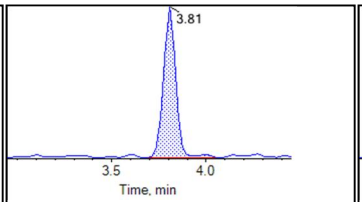
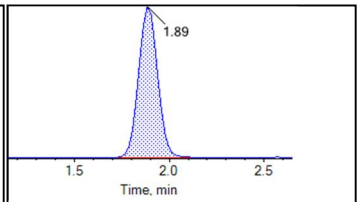


d5-EtFOSAA



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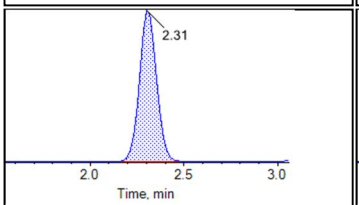

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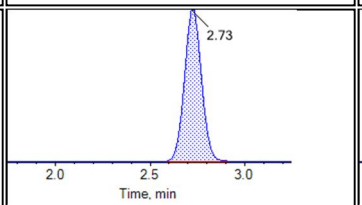

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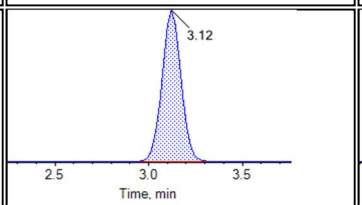

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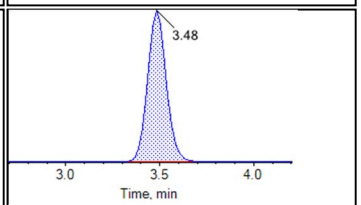

13C6-PFDA

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Chromatogram Report

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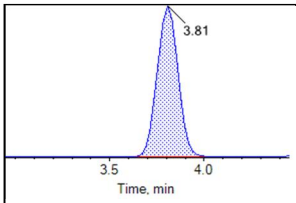

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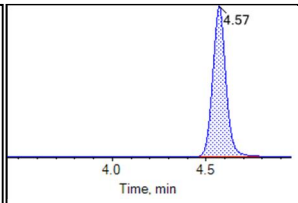

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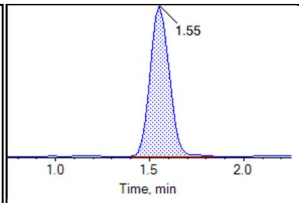
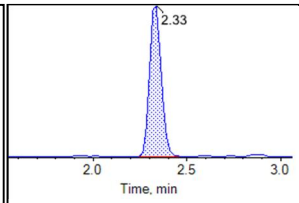


13C3-PFBS



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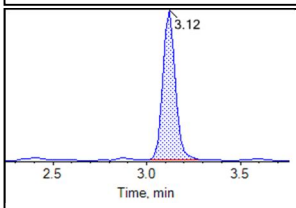

13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 2:06:51 PM

Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_BASE
Sample Comment			

Chromatograms

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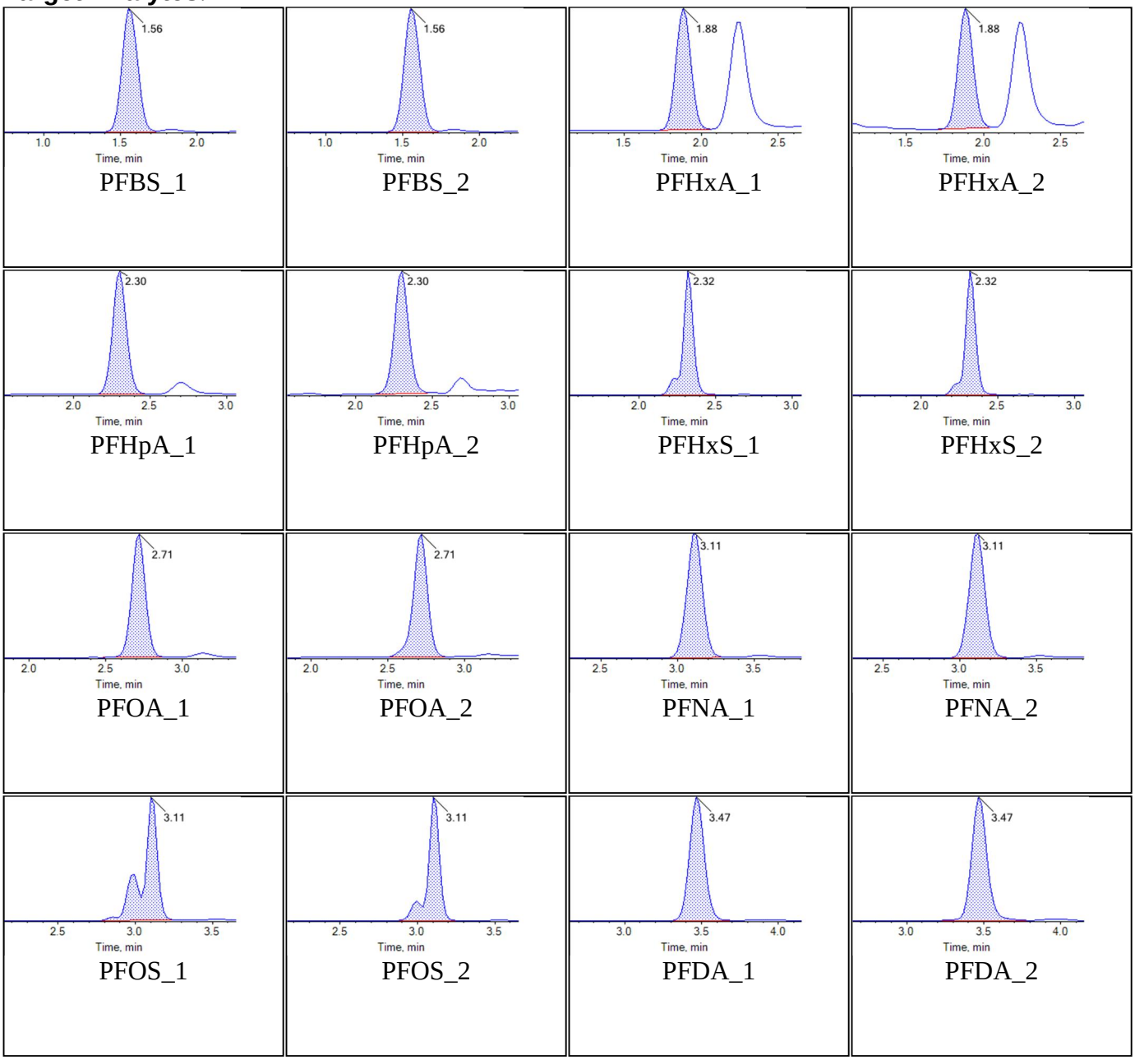

BATTELLE

Chromatogram Report

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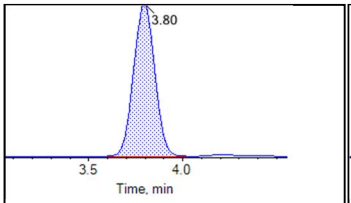

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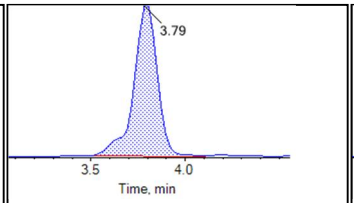
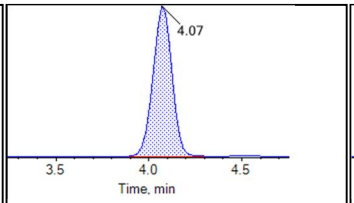
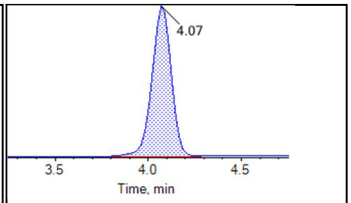


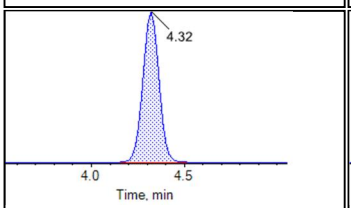
PFUnA_2



PFDoA_1



PFDoA_2



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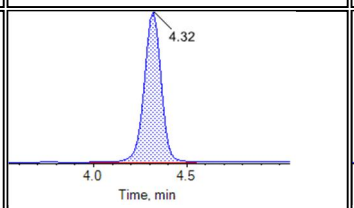

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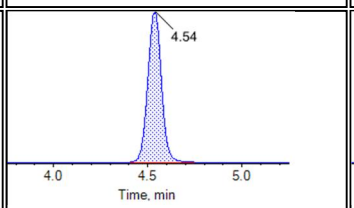

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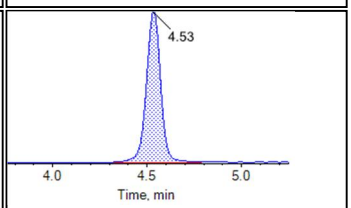

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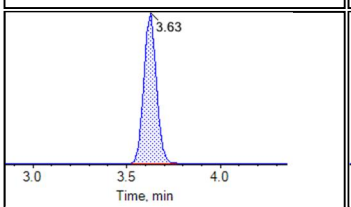

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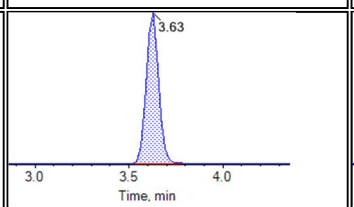

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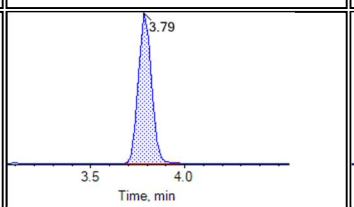
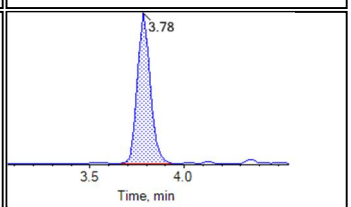
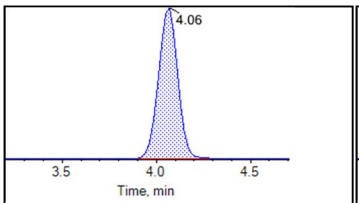


NEtFOSAA_1

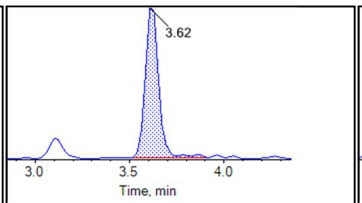


NEtFOSAA_2

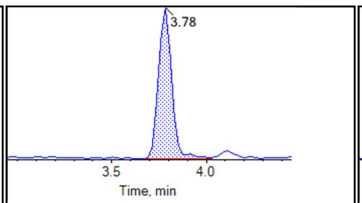
Internal Standards:



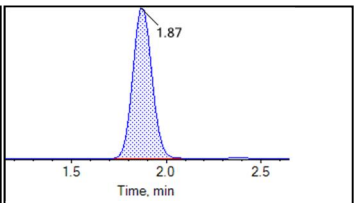
13C2-PFDoA



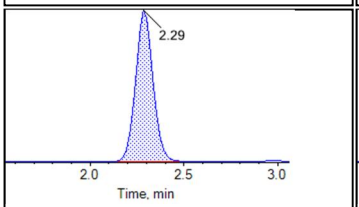
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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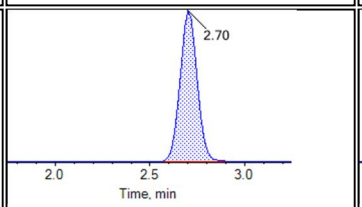
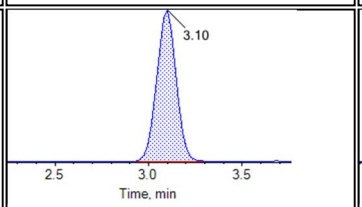
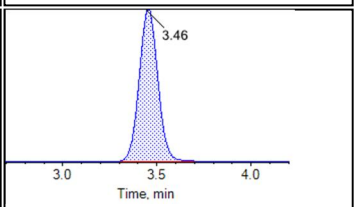


13C8-PFOA



13C9-PFNA



13C6-PFDA

BATTELLE

Chromatogram Report

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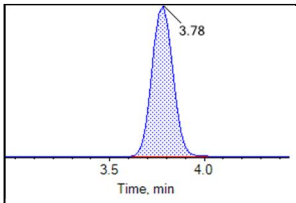
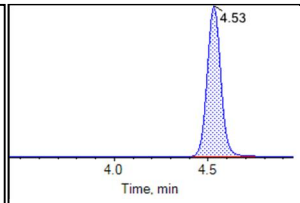
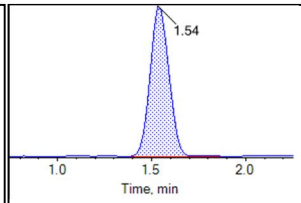


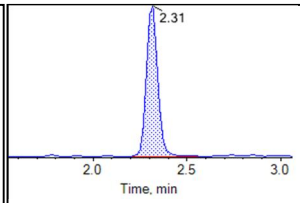
13C7-PFUnA



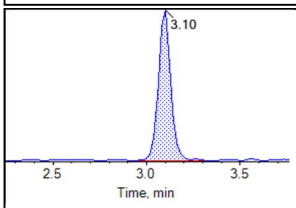
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

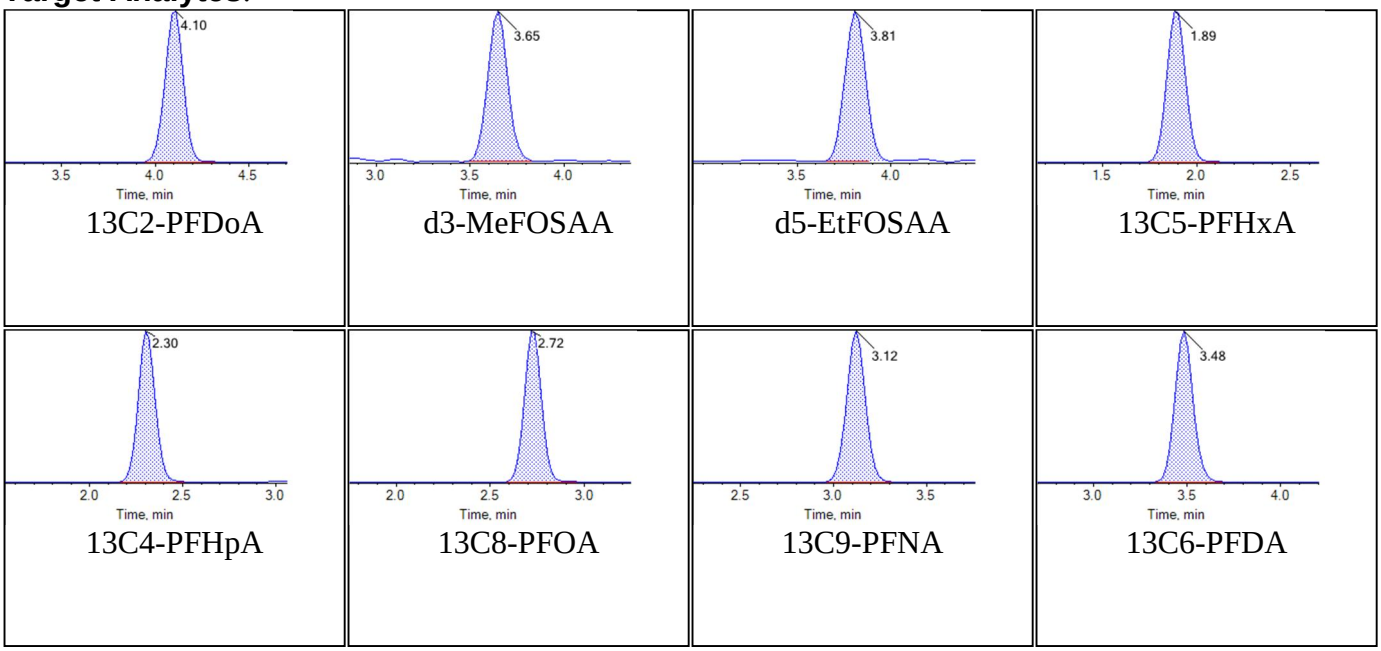
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:53:22 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**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

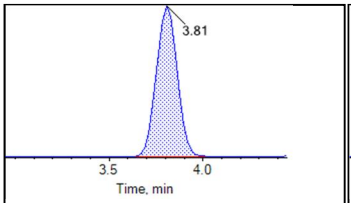
Target Analytes:



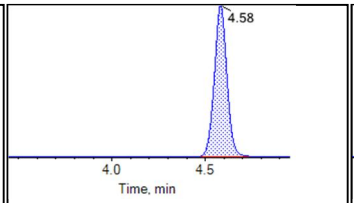
BATTELLE

Chromatogram Report

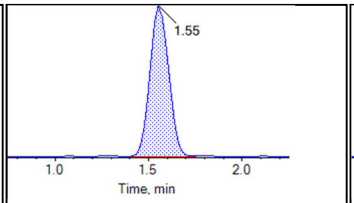
Created with Analyst Reporter
Printed: 24/10/2018 1:53:22 PM



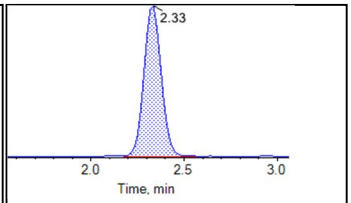
13C7-PFUnA



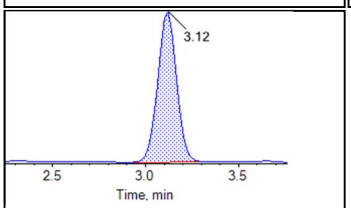
13C2-PFTeDA



13C3-PFBS

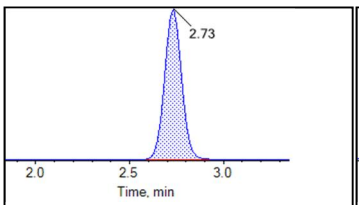


13C3-PFHxS

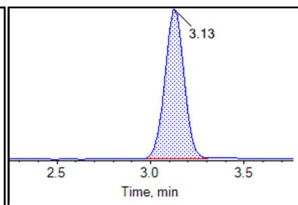


13C8-PFOS

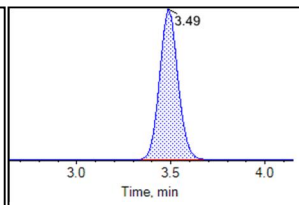
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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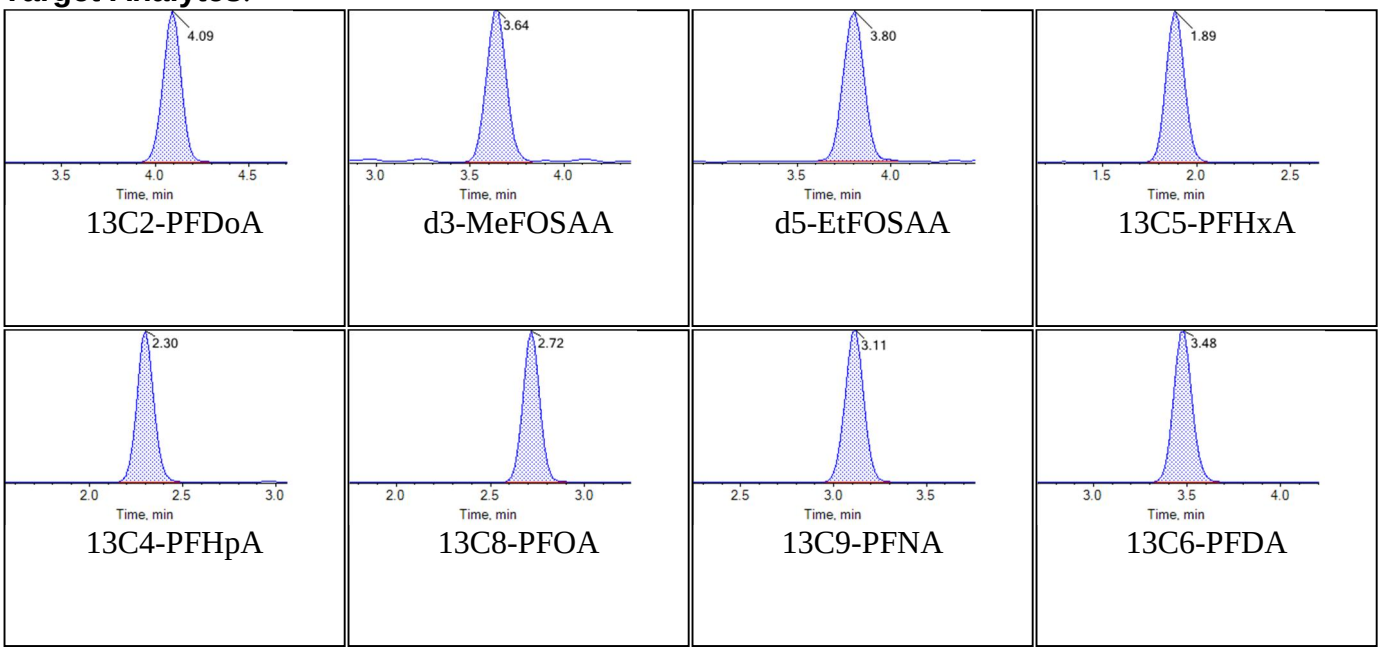
Printed: 24/10/2018 1:53:27 PM

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**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

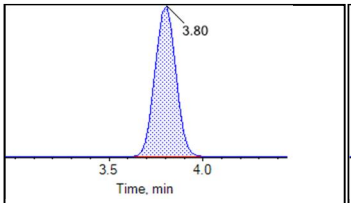
Target Analytes:



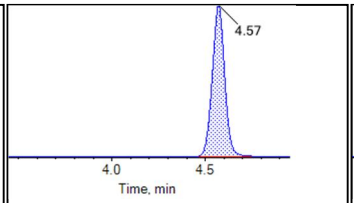
BATTELLE

Chromatogram Report

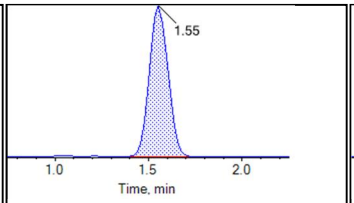
Created with Analyst Reporter
Printed: 24/10/2018 1:53:27 PM



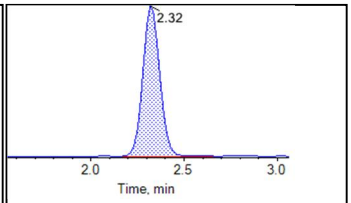
13C7-PFUnA



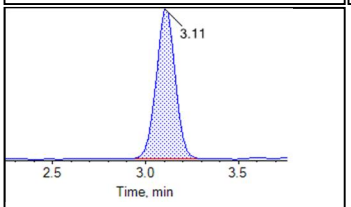
13C2-PFTeDA



13C3-PFBS

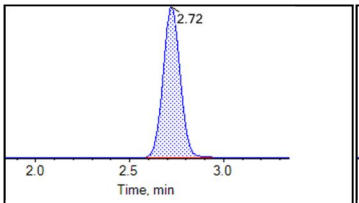


13C3-PFHxS

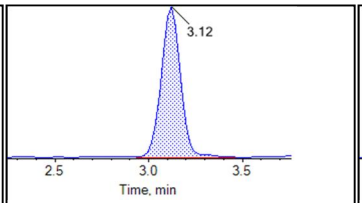


13C8-PFOS

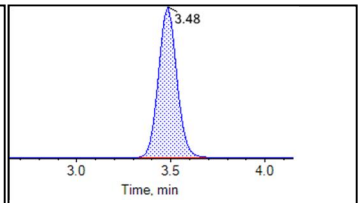
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

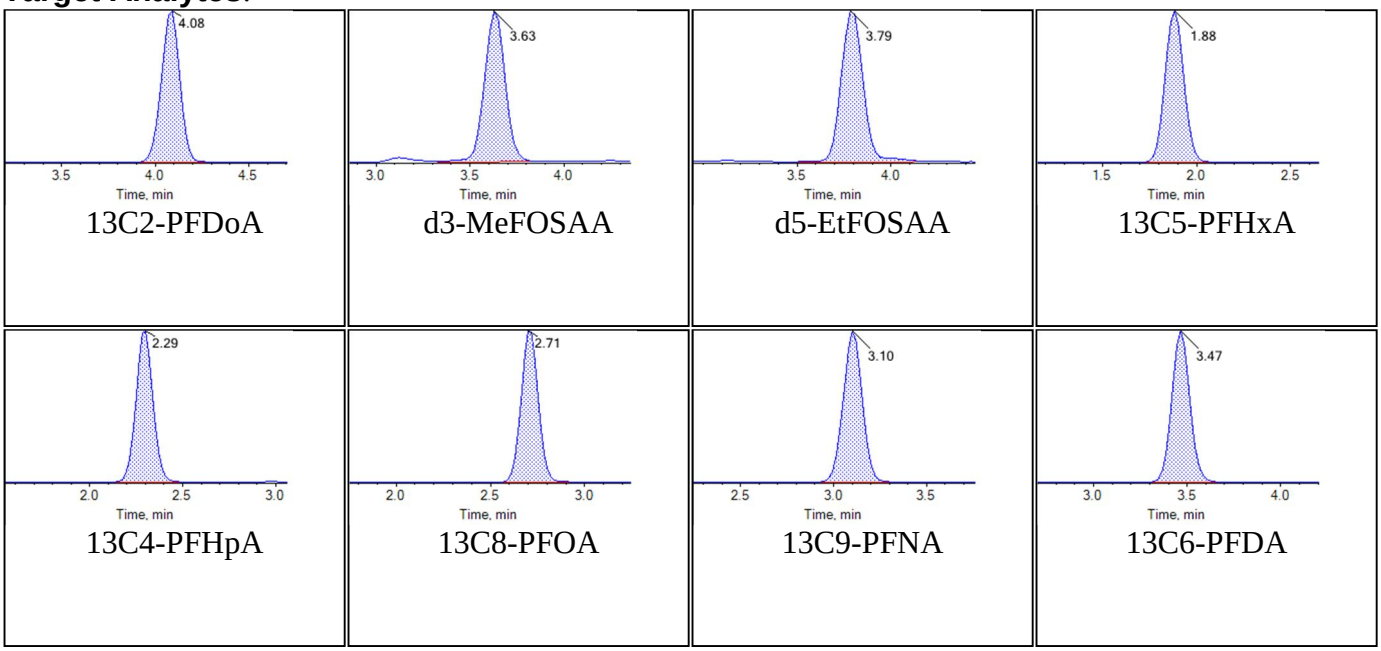
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:53:32 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**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

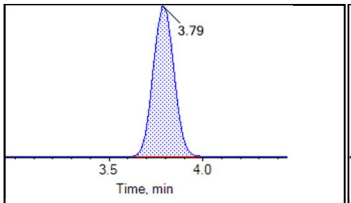
Target Analytes:



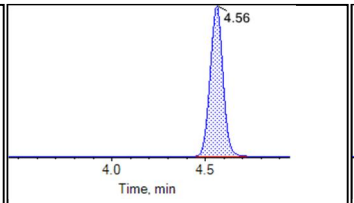
BATTELLE

Chromatogram Report

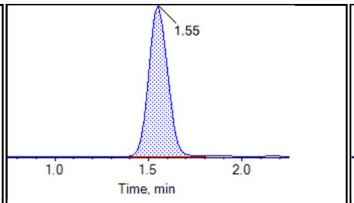
Created with Analyst Reporter
Printed: 24/10/2018 1:53:32 PM



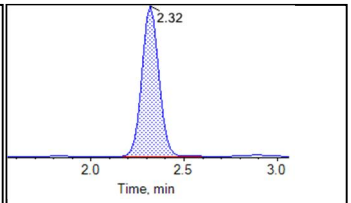
13C7-PFUnA



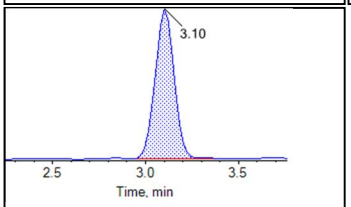
13C2-PFTeDA



13C3-PFBS

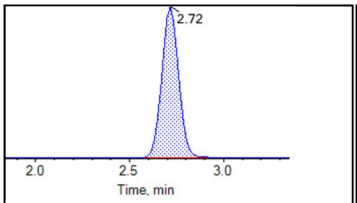


13C3-PFHxS

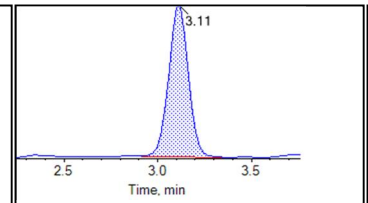


13C8-PFOS

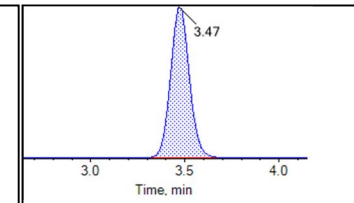
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

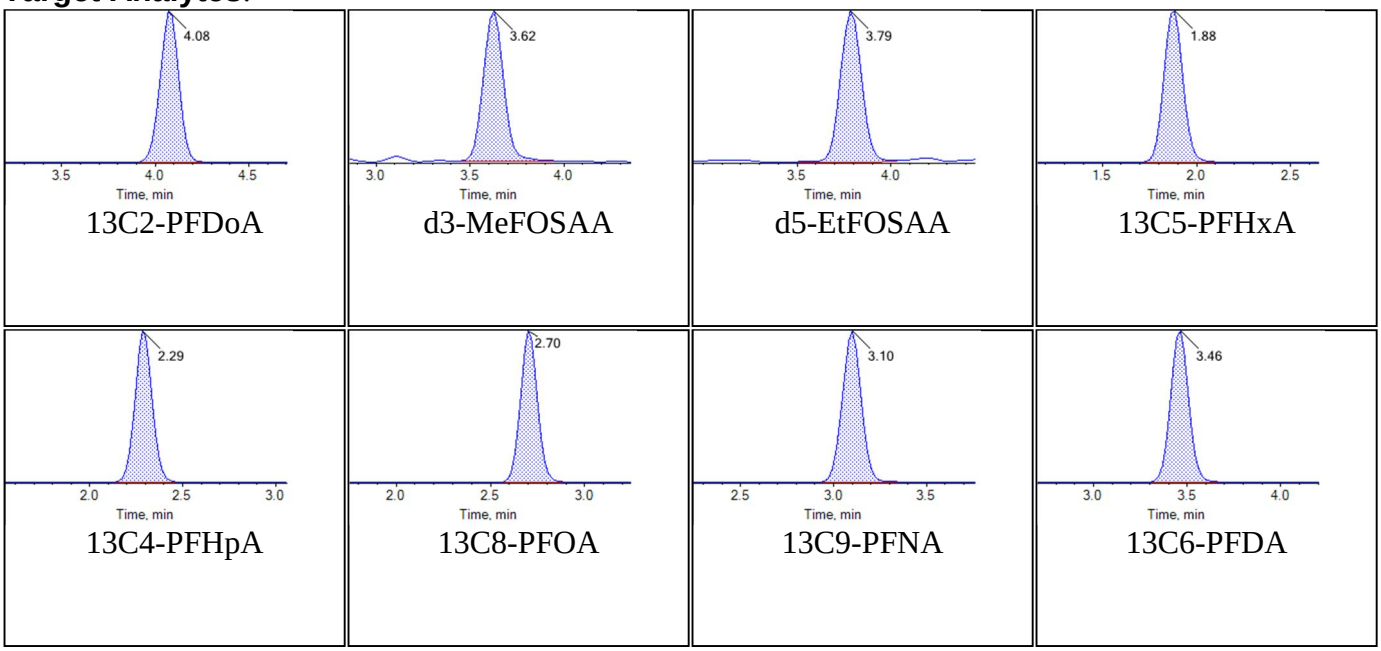
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:53:37 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**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

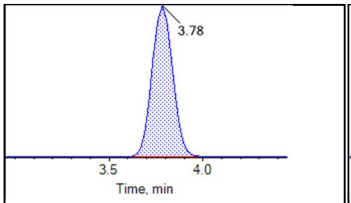
Target Analytes:



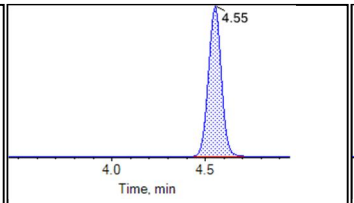
BATTELLE

Chromatogram Report

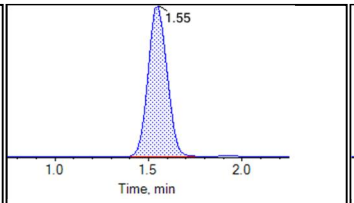
Created with Analyst Reporter
Printed: 24/10/2018 1:53:37 PM



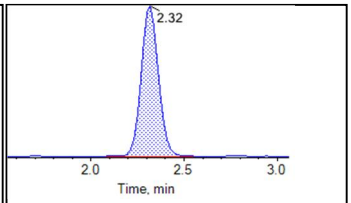
13C7-PFUnA



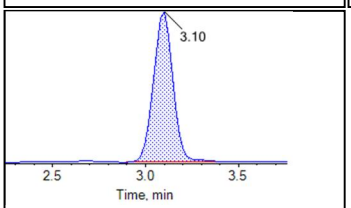
13C2-PFTeDA



13C3-PFBS

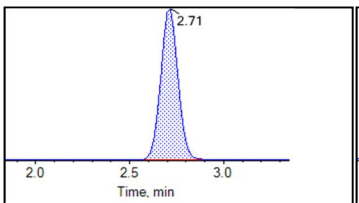


13C3-PFHxS

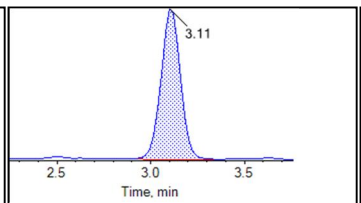


13C8-PFOS

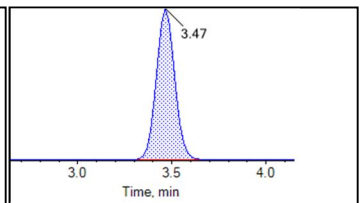
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

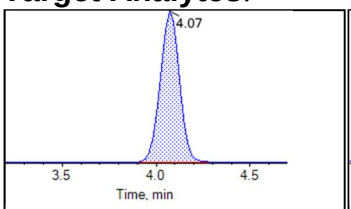
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:53:41 PM

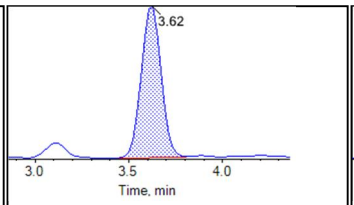
Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:30:23	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

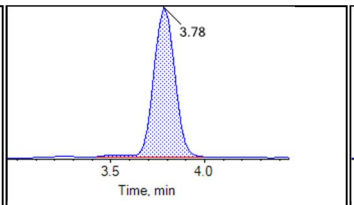
Target Analytes:



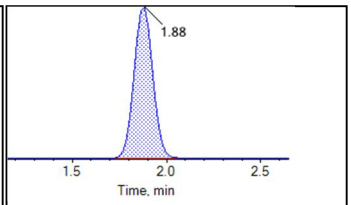
13C2-PFDoA



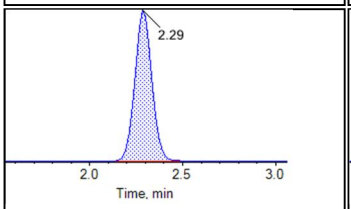
d3-MeFOSAA



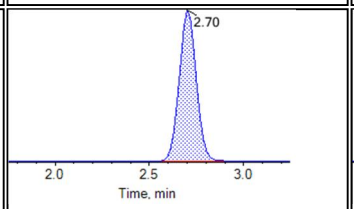
d5-EtFOSAA



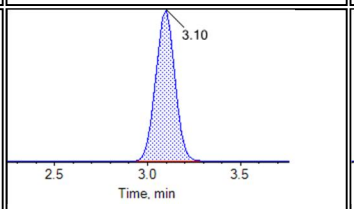
13C5-PFHxA



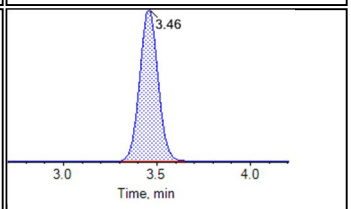
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

BATTELLE

Chromatogram Report

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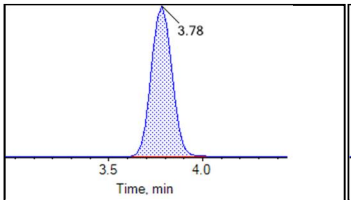
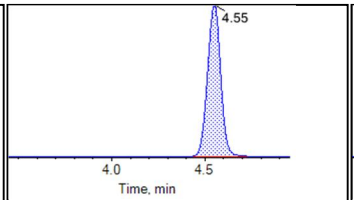
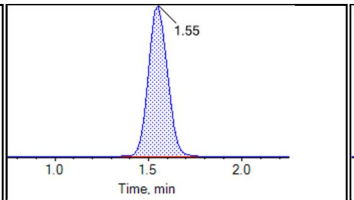


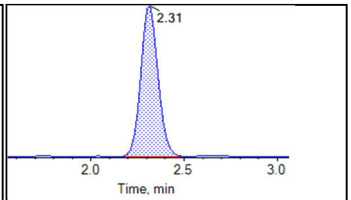
13C7-PFUnA



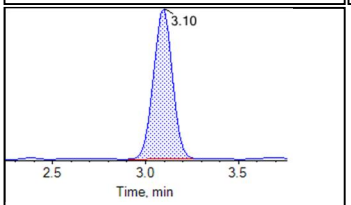
13C2-PFTeDA



13C3-PFBS

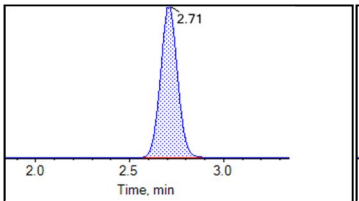


13C3-PFHxS

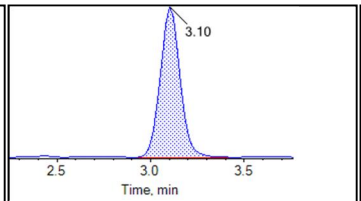


13C8-PFOS

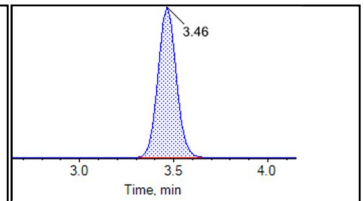
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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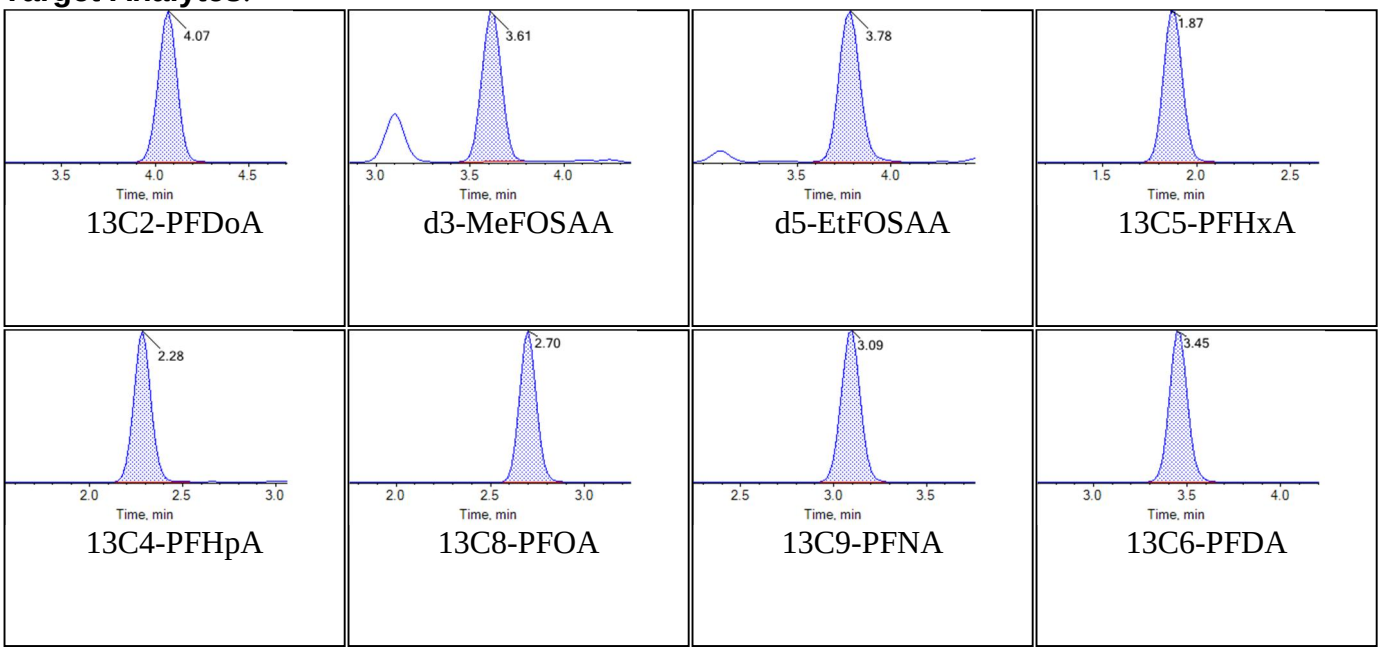
Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:41:14	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

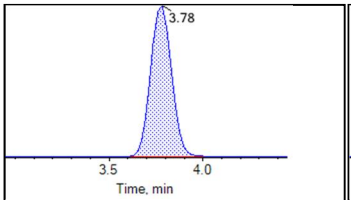
Target Analytes:



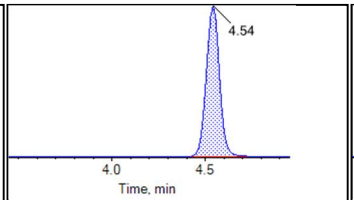
BATTELLE

Chromatogram Report

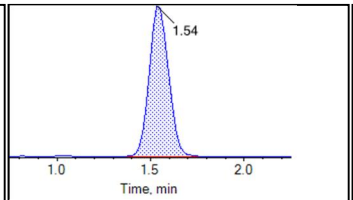
Created with Analyst Reporter
Printed: 24/10/2018 1:53:47 PM



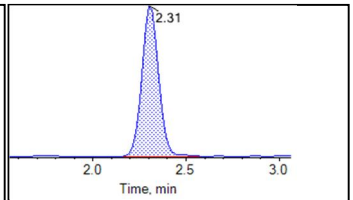
13C7-PFUnA



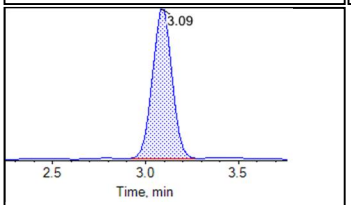
13C2-PFTeDA



13C3-PFBS

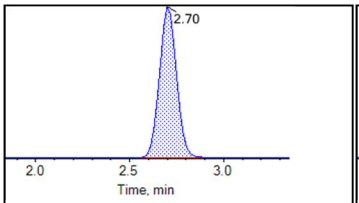


13C3-PFHxS

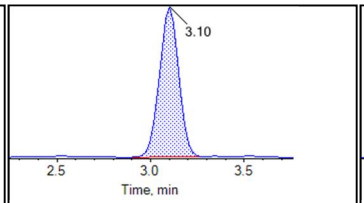


13C8-PFOS

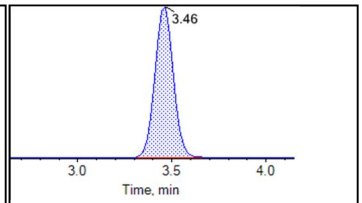
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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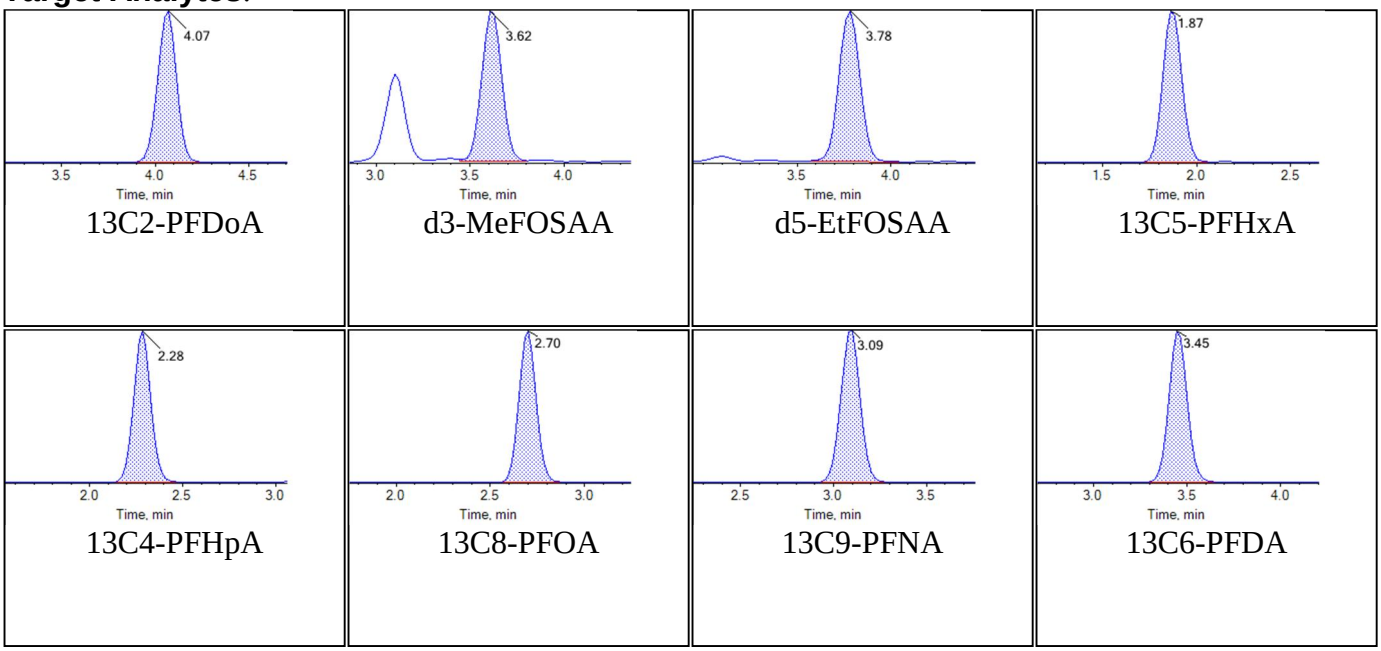
Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T20:52:06	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

Target Analytes:



BATTELLE

Chromatogram Report

Created with Analyst Reporter
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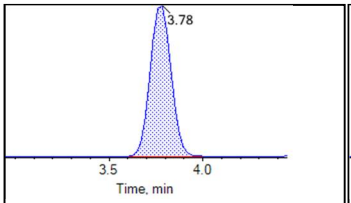
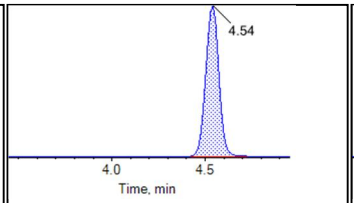
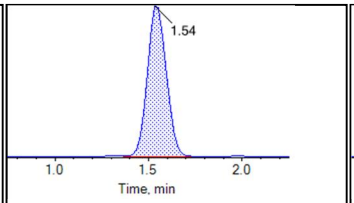


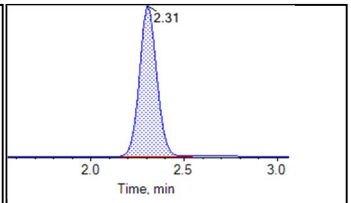
13C7-PFUnA



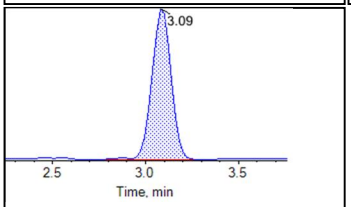
13C2-PFTeDA



13C3-PFBS

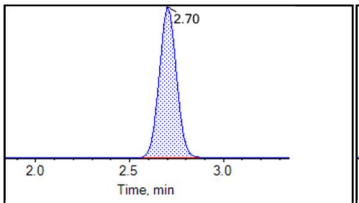


13C3-PFHxS

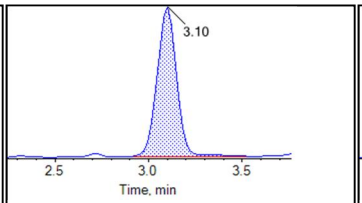


13C8-PFOS

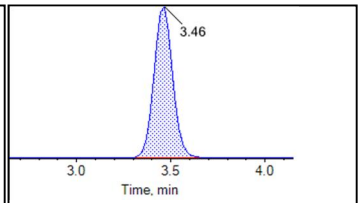
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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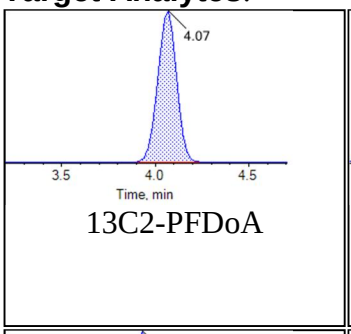
Printed: 24/10/2018 1:53:56 PM

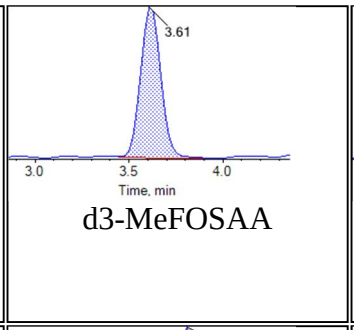
Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-17T21:02:57	**Data File**	Data18-0590_18-01588_18-0589.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

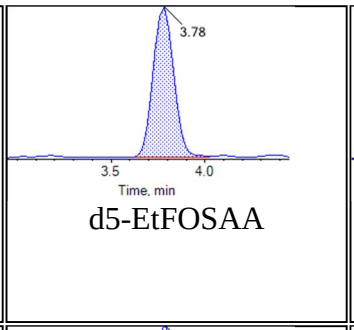
Target Analytes:



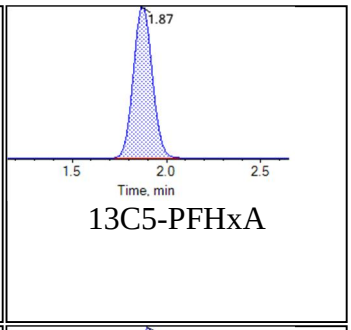
13C2-PFDoA



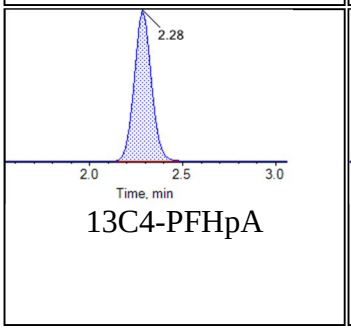
d3-MeFOSAA



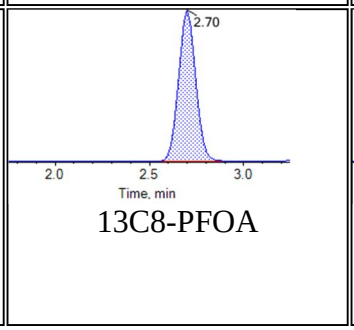
d5-EtFOSAA



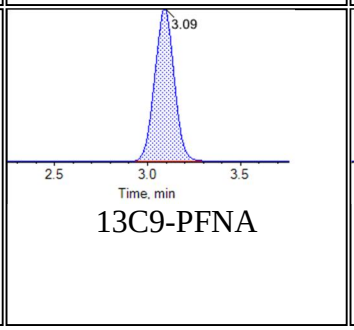
13C5-PFHxA



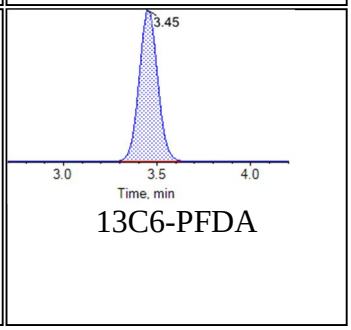
13C4-PFHpA



13C8-PFOA



13C9-PFNA



13C6-PFDA

BATTELLE

Chromatogram Report

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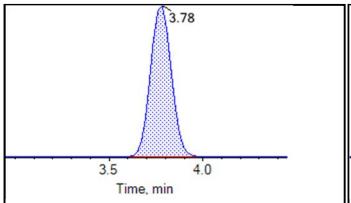
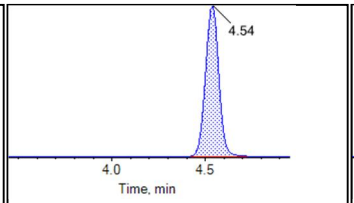
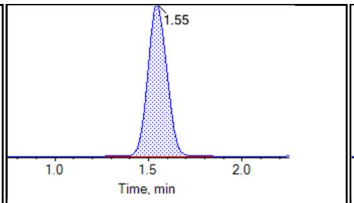
Printed: 24/10/2018 1:53:56 PM



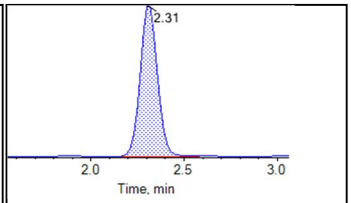
13C7-PFUnA



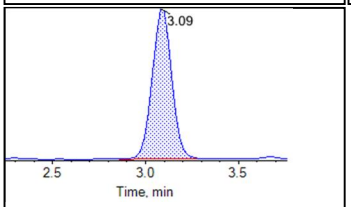
13C2-PFTeDA



13C3-PFBS

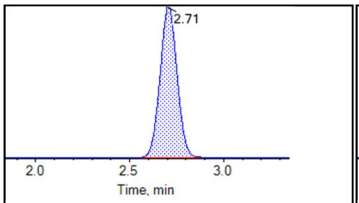


13C3-PFHxS

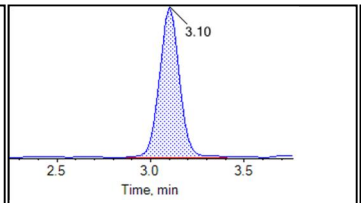


13C8-PFOS

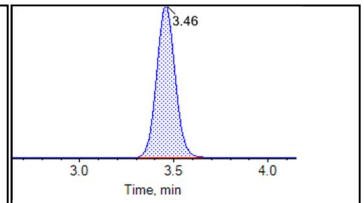
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

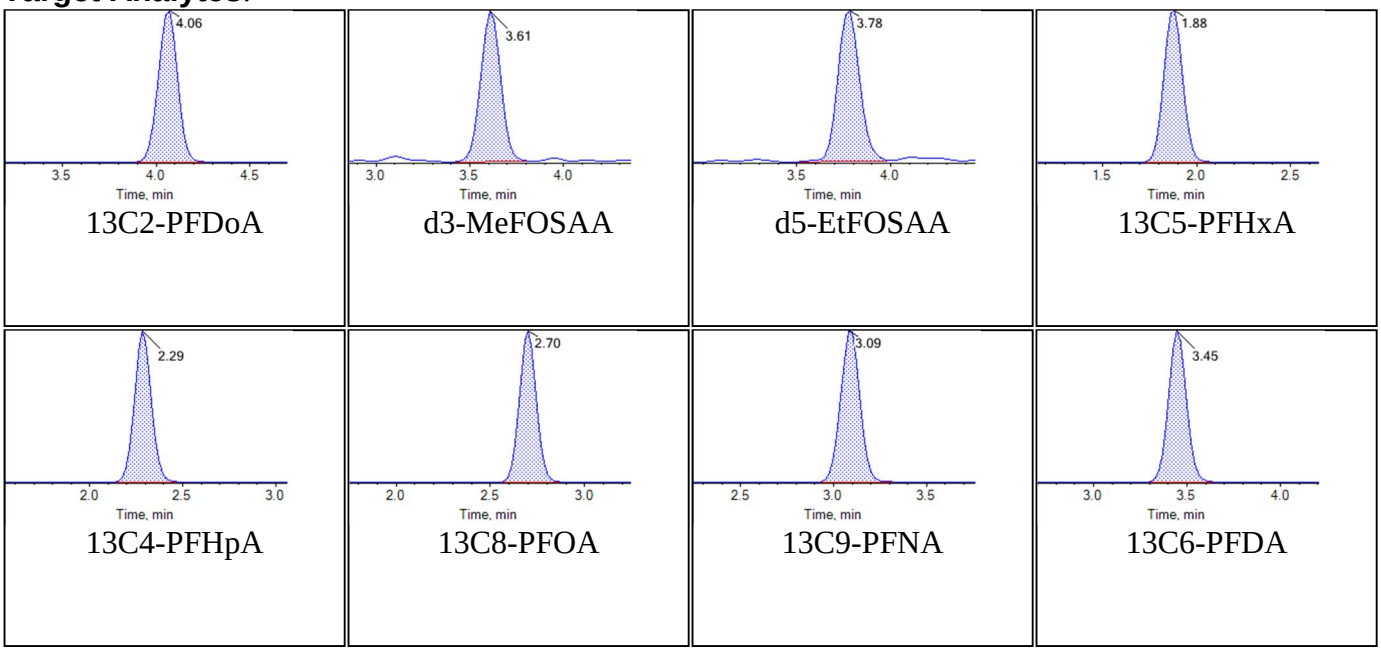
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:54:02 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**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

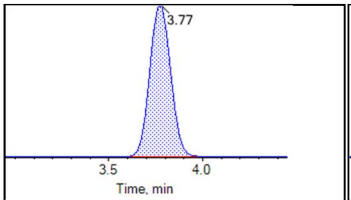
Target Analytes:



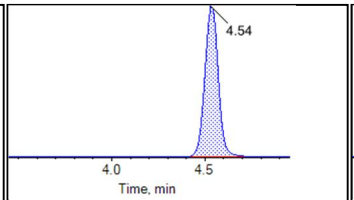
BATTELLE

Chromatogram Report

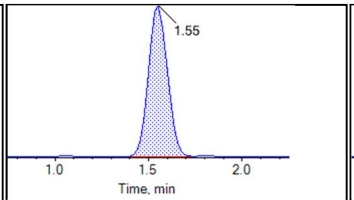
Created with Analyst Reporter
Printed: 24/10/2018 1:54:02 PM



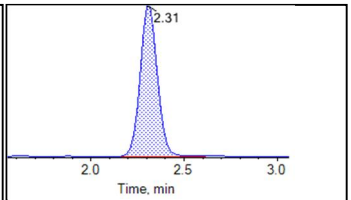
13C7-PFUnA



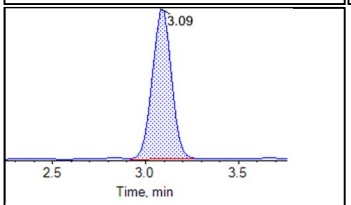
13C2-PFTeDA



13C3-PFBS

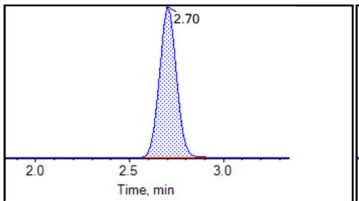


13C3-PFHxS

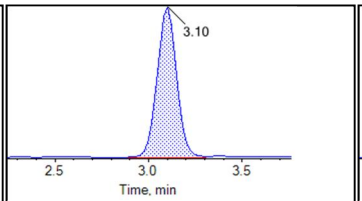


13C8-PFOS

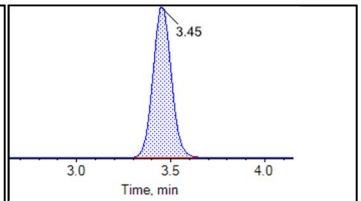
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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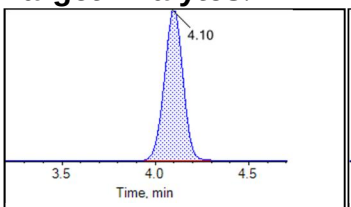
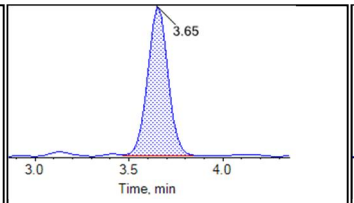
Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:16:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

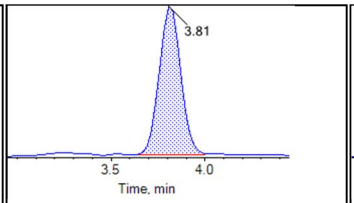
Target Analytes:



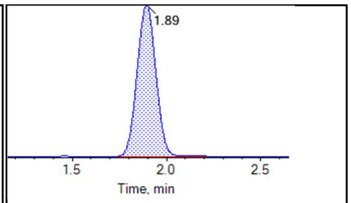
13C2-PFDoA



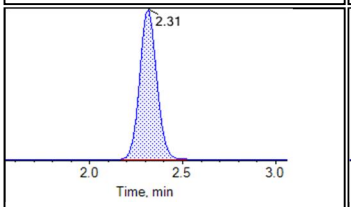
d3-MeFOSAA



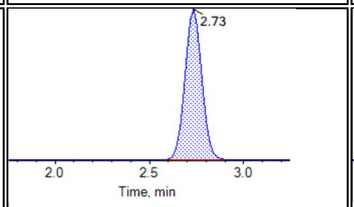
d5-EtFOSAA



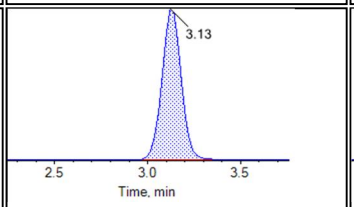
13C5-PFHxA



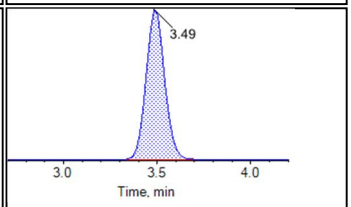
13C4-PFHpA



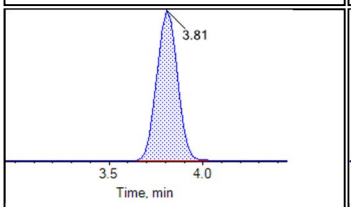
13C8-PFOA



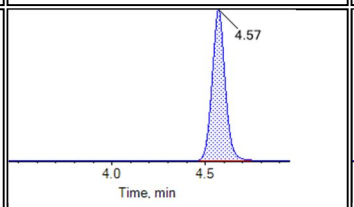
13C9-PFNA



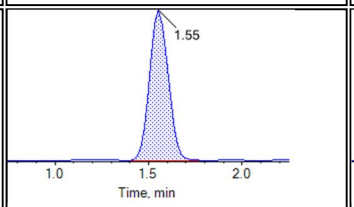
13C6-PFDA



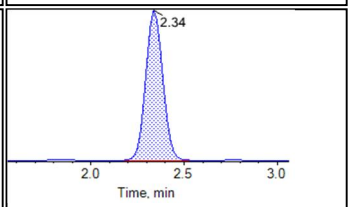
13C7-PFUnA



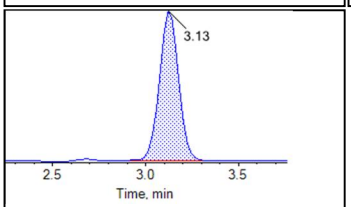
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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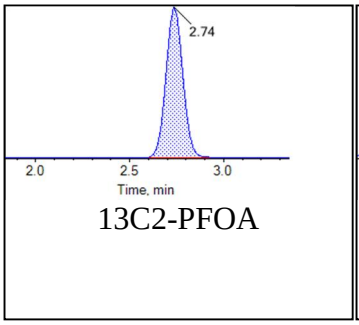
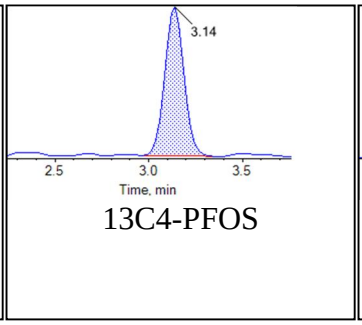
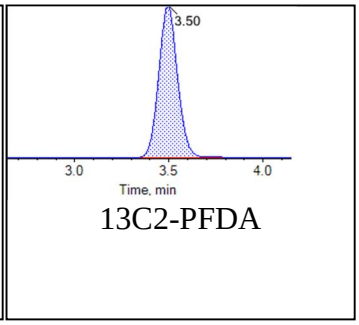
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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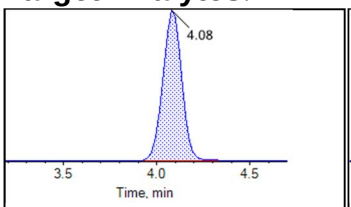
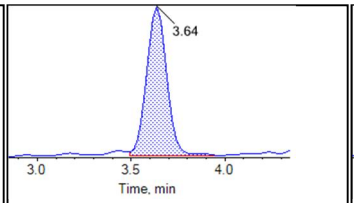
Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T18:27:43	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

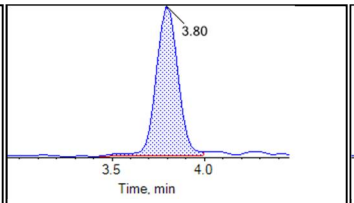
Target Analytes:



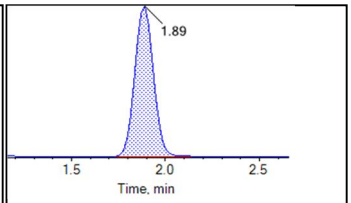
13C2-PFDoA



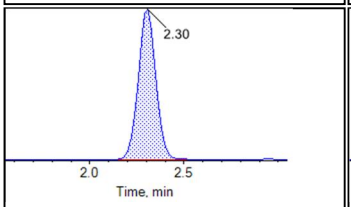
d3-MeFOSAA



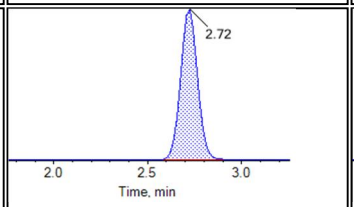
d5-EtFOSAA



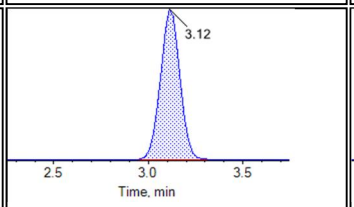
13C5-PFHxA



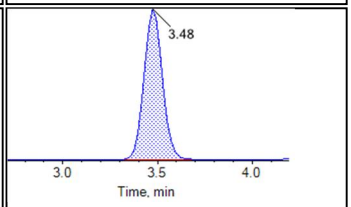
13C4-PFHpA



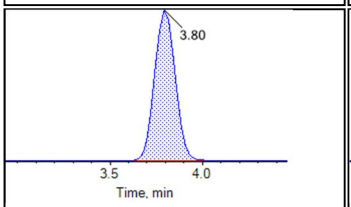
13C8-PFOA



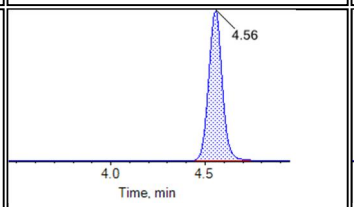
13C9-PFNA



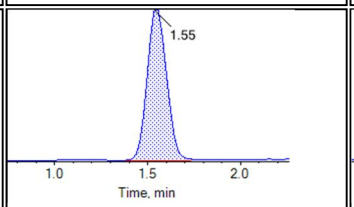
13C6-PFDA



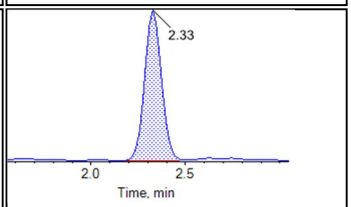
13C7-PFUnA



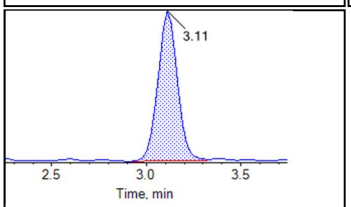
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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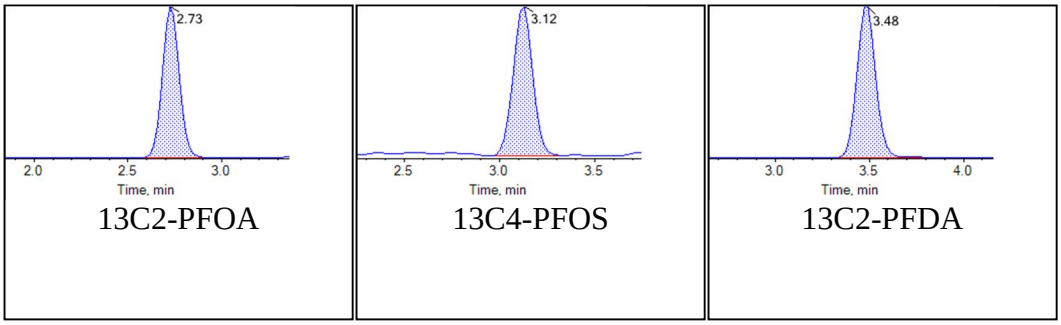
Internal Standards:



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Chromatogram Report

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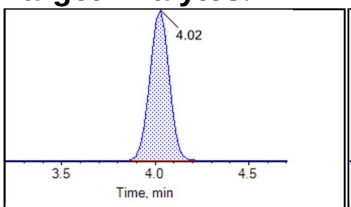
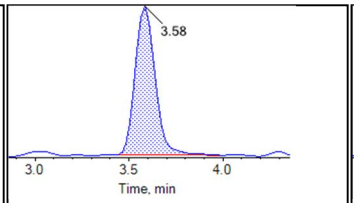
Sample Name	KB76 CCV	**Injection Vial**	29
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-19T23:53:48	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

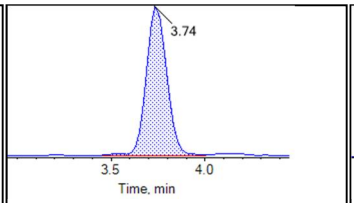
Target Analytes:



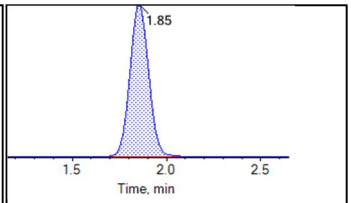
13C2-PFDoA



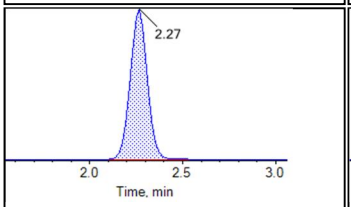
d3-MeFOSAA



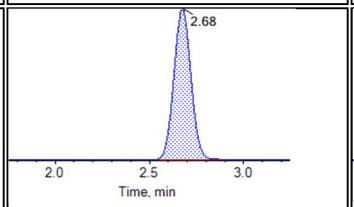
d5-EtFOSAA



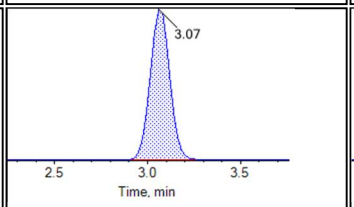
13C5-PFHxA



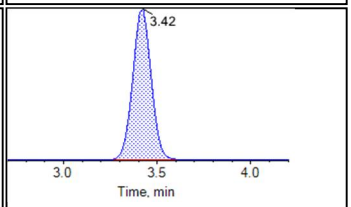
13C4-PFHpA



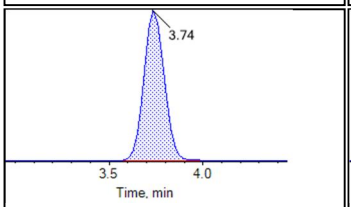
13C8-PFOA



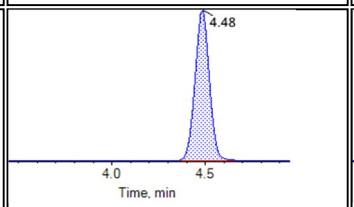
13C9-PFNA



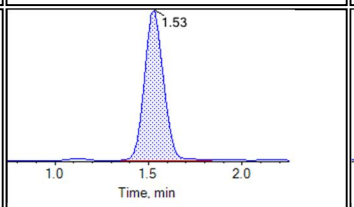
13C6-PFDA



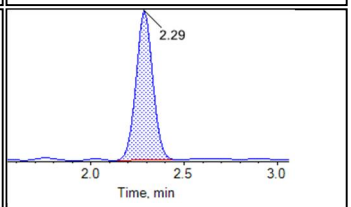
13C7-PFUnA



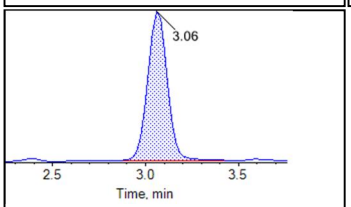
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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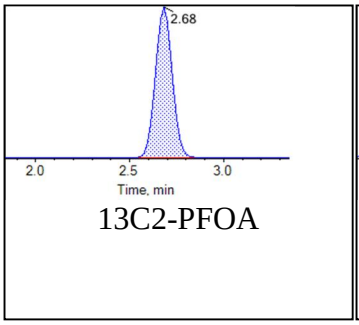
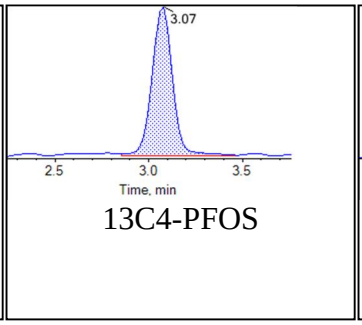
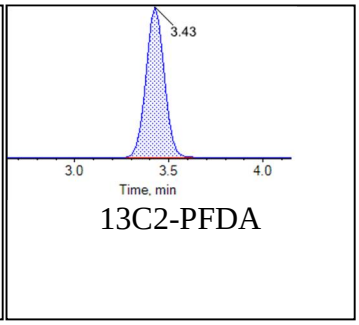
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

Chromatogram Report

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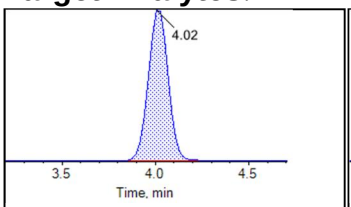
Printed: 24/10/2018 1:54:38 PM

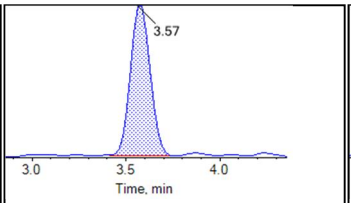
Sample Name	CR988PB-FS(3)	**Injection Vial**	31
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:15:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

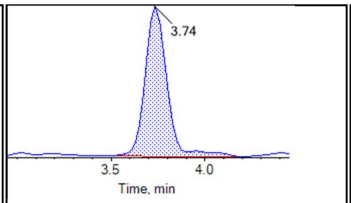
Target Analytes:



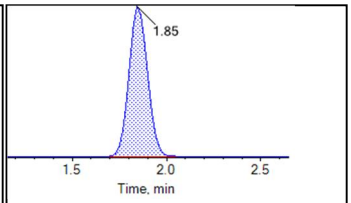
13C2-PFDoA



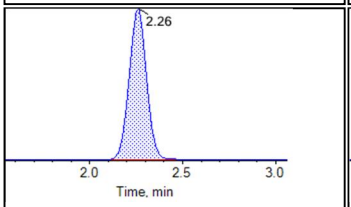
d3-MeFOSAA



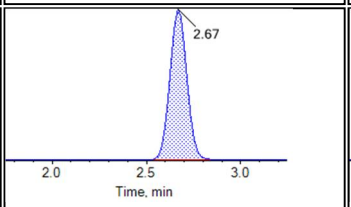
d5-EtFOSAA



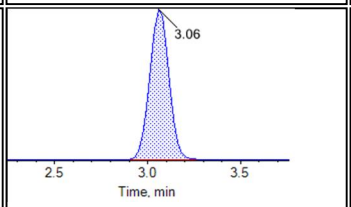
13C5-PFHxA



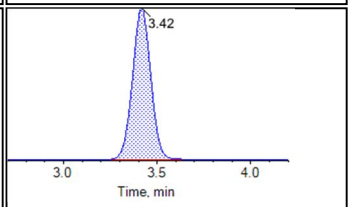
13C4-PFHpA



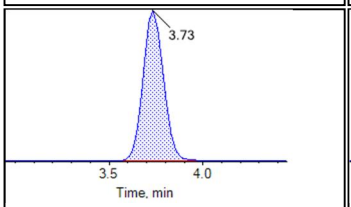
13C8-PFOA



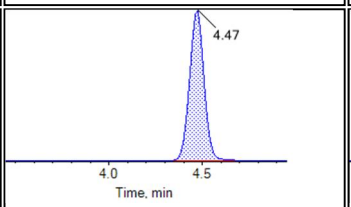
13C9-PFNA



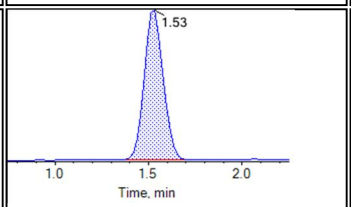
13C6-PFDA



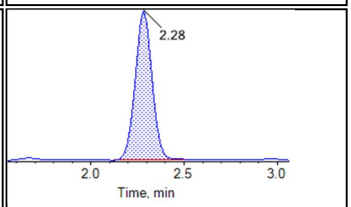
13C7-PFUnA



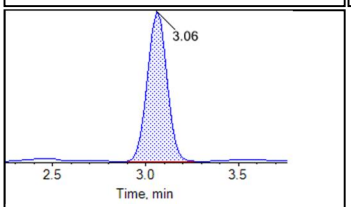
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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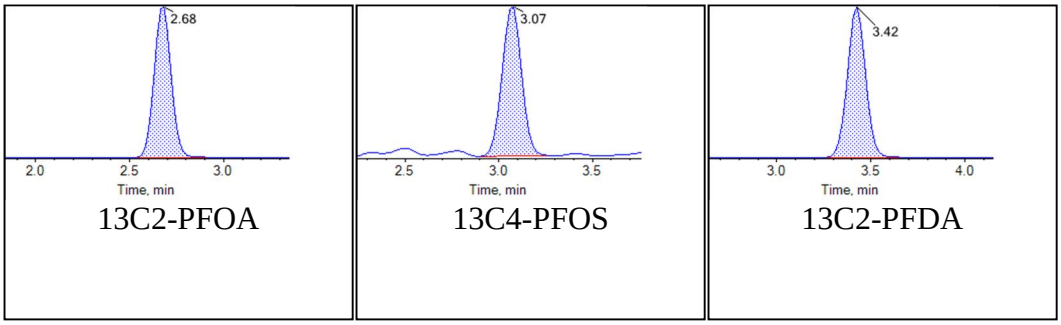
Printed: 24/10/2018 1:54:38 PM

Internal Standards:



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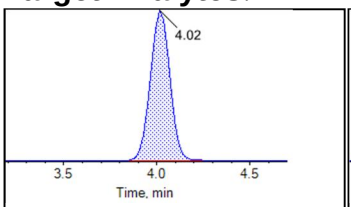
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:54:42 PM

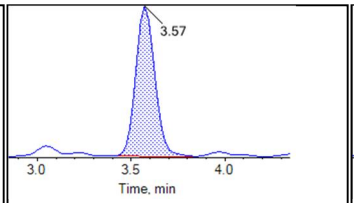
Sample Name	CR989LCS-FS(3)	**Injection Vial**	32
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:26:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

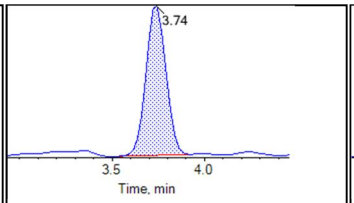
Target Analytes:



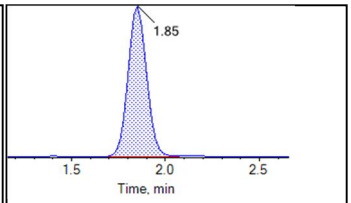
13C2-PFDoA



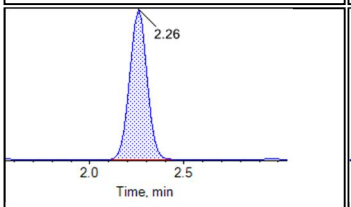
d3-MeFOSAA



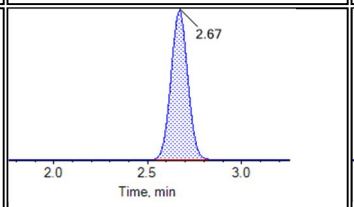
d5-EtFOSAA



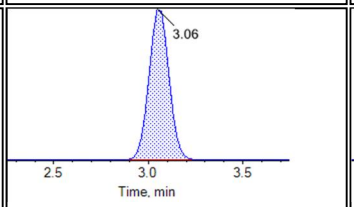
13C5-PFHxA



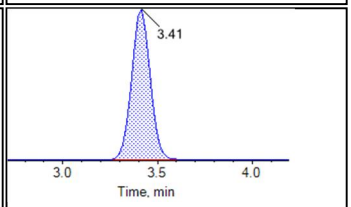
13C4-PFHpA



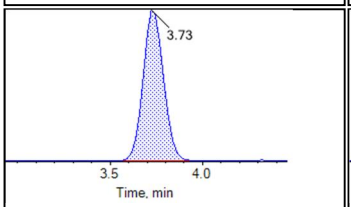
13C8-PFOA



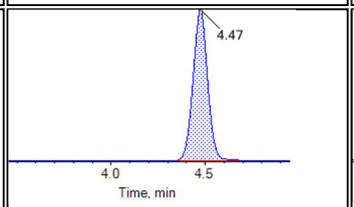
13C9-PFNA



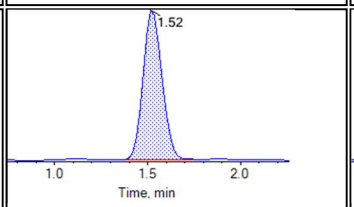
13C6-PFDA



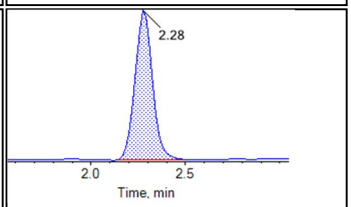
13C7-PFUnA



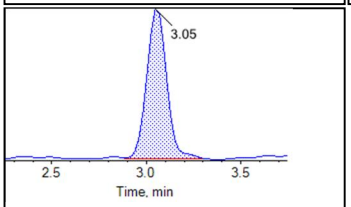
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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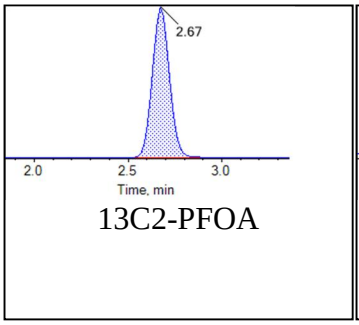
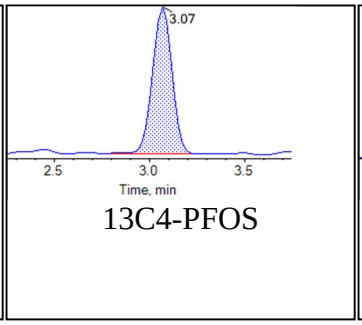
Printed: 24/10/2018 1:54:42 PM

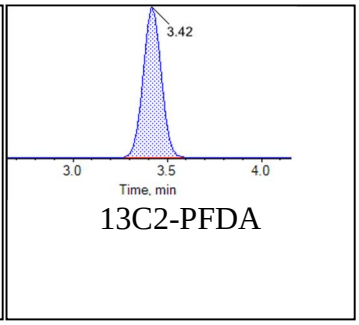
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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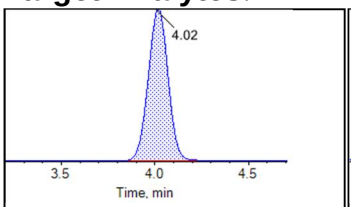
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:54:46 PM

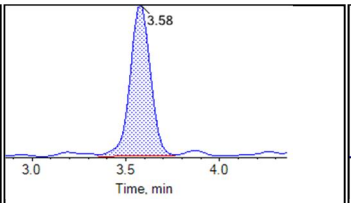
Sample Name	J8658-FS(3)	**Injection Vial**	33
Sample ID	VC-CS12-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:37:17	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

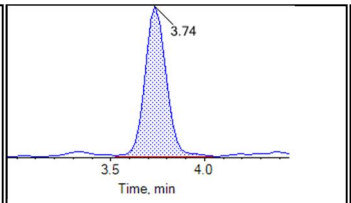
Target Analytes:



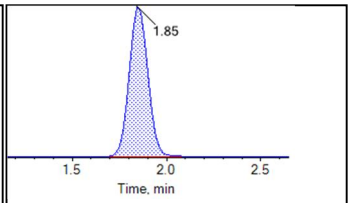
13C2-PFDoA



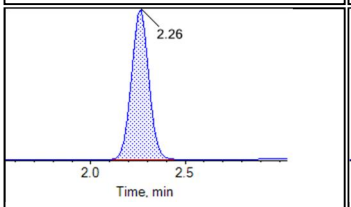
d3-MeFOSAA



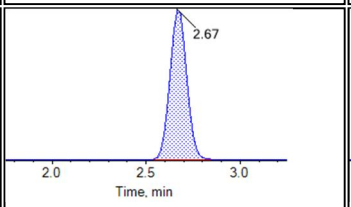
d5-EtFOSAA



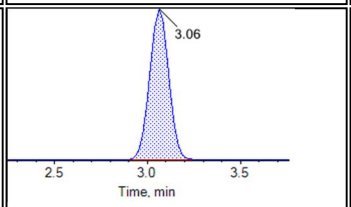
13C5-PFHxA



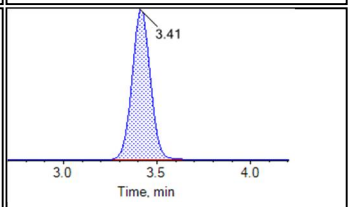
13C4-PFHpA



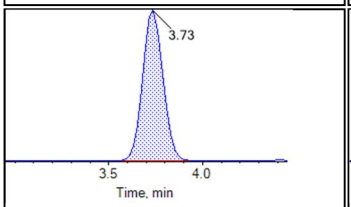
13C8-PFOA



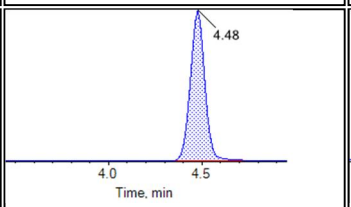
13C9-PFNA



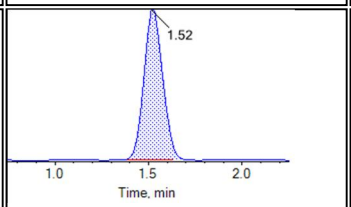
13C6-PFDA



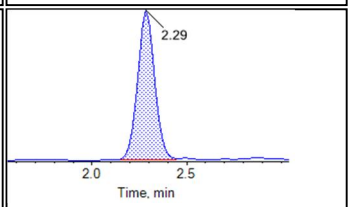
13C7-PFUnA



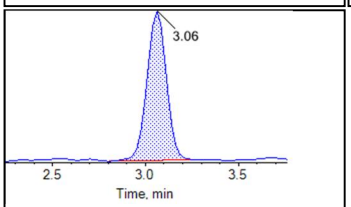
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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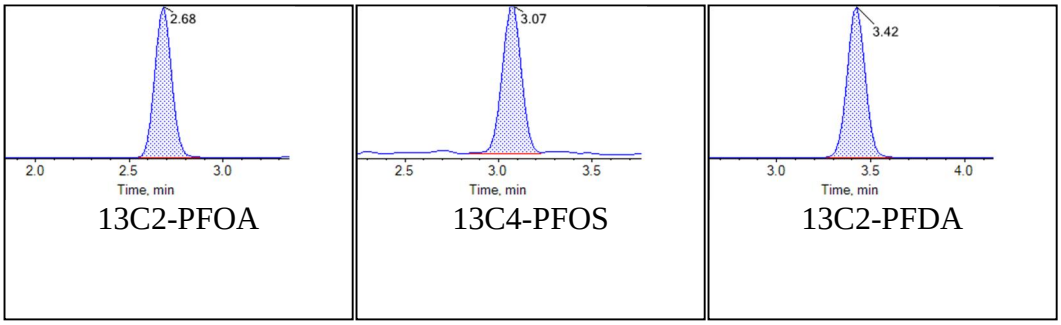
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:54:46 PM

Internal Standards:



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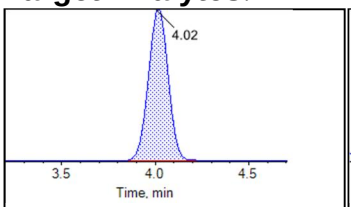
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:54:51 PM

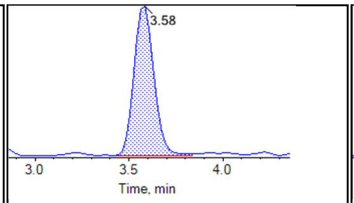
Sample Name	J8659-FS(3)	**Injection Vial**	34
Sample ID	VC-CS12-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:48:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

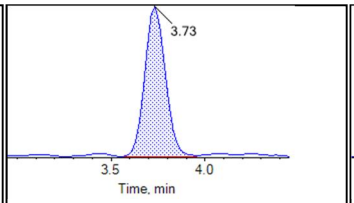
Target Analytes:



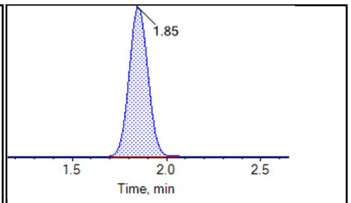
13C2-PFDoA



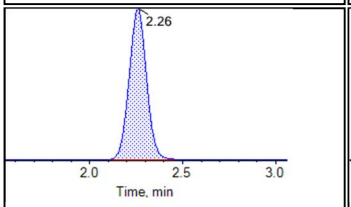
d3-MeFOSAA



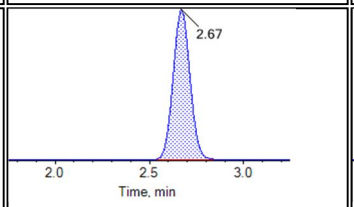
d5-EtFOSAA



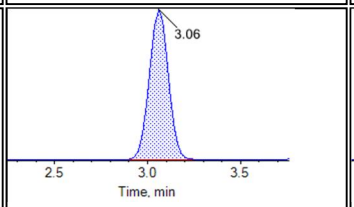
13C5-PFHxA



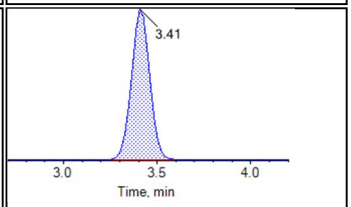
13C4-PFHpA



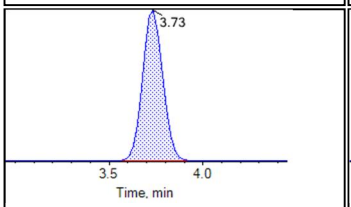
13C8-PFOA



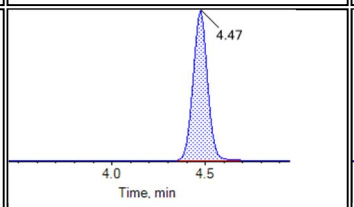
13C9-PFNA



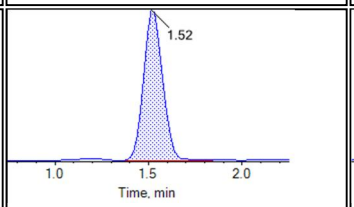
13C6-PFDA



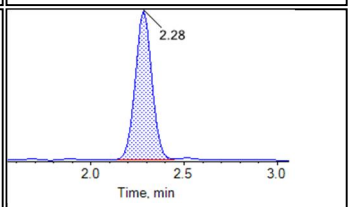
13C7-PFUnA



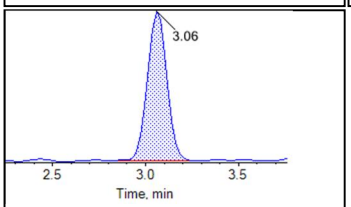
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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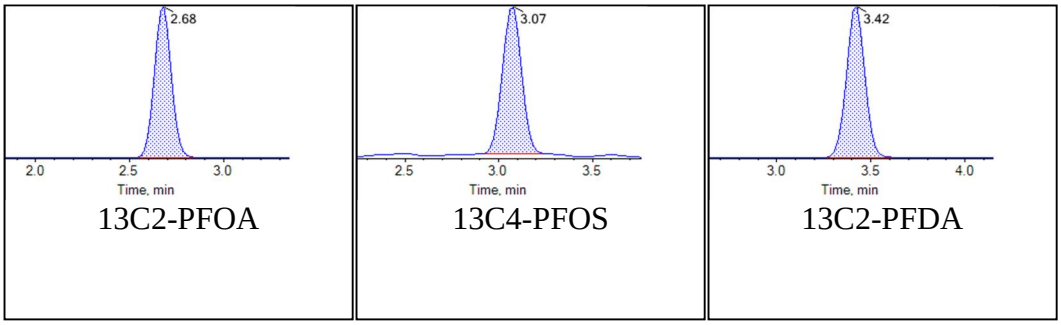
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:54:51 PM

Internal Standards:



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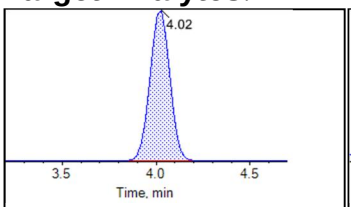
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:54:55 PM

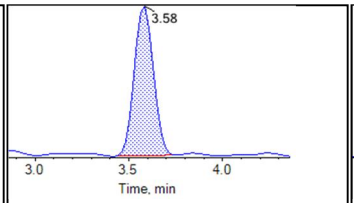
Sample Name	J8660-FS(3)	**Injection Vial**	35
Sample ID	VC-CS12-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T00:59:00	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

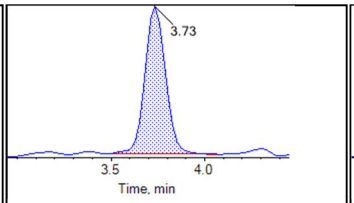
Target Analytes:



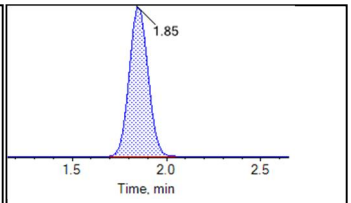
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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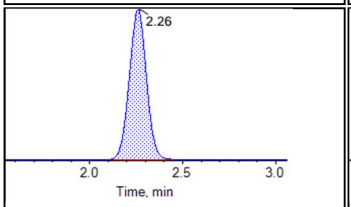
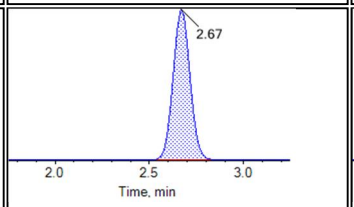
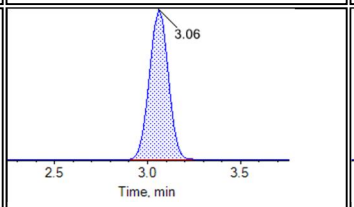


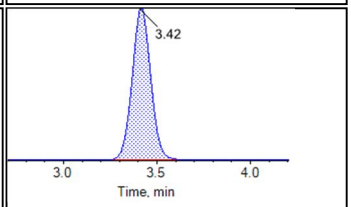
13C4-PFHpA



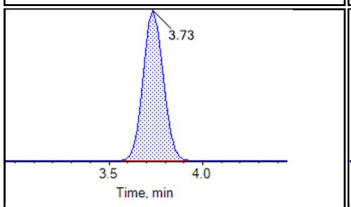
13C8-PFOA



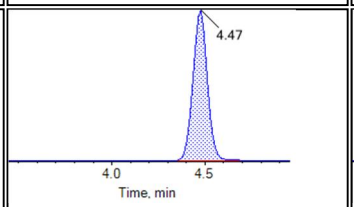
13C9-PFNA



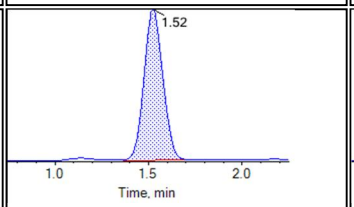
13C6-PFDA



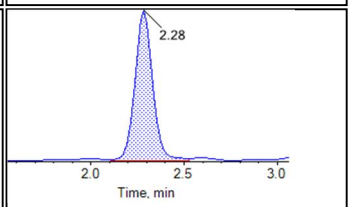
13C7-PFUnA



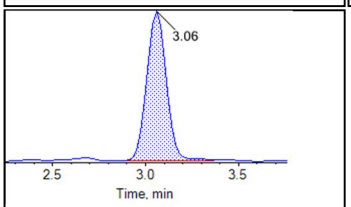
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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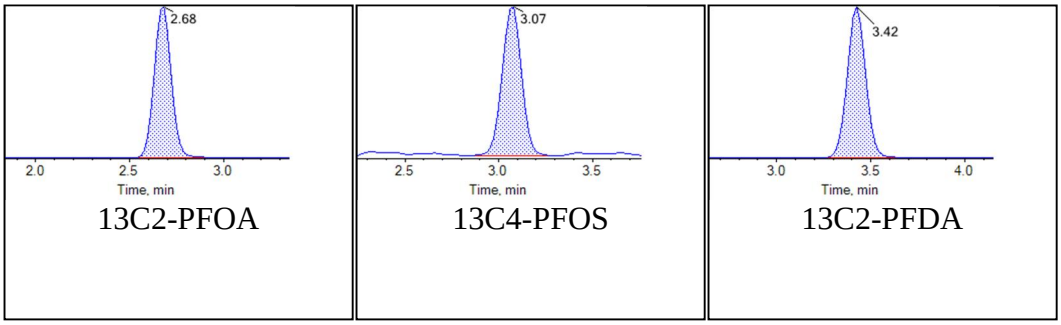
Internal Standards:



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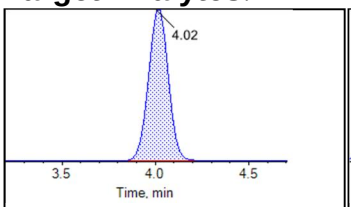
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:55:00 PM

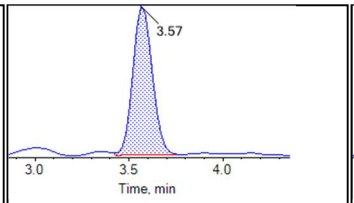
Sample Name	J8661-FS(3)	**Injection Vial**	36
Sample ID	VC-CS12-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:09:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

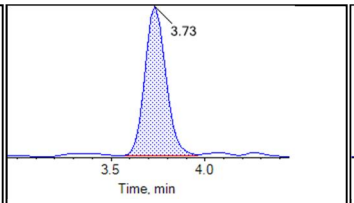
Target Analytes:



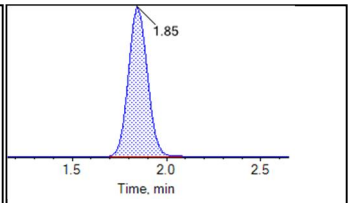
13C2-PFDoA



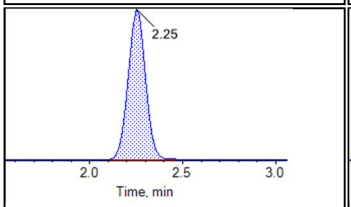
d3-MeFOSAA



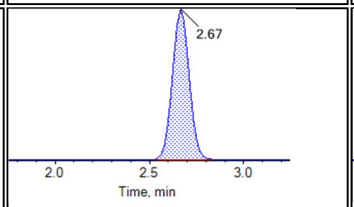
d5-EtFOSAA



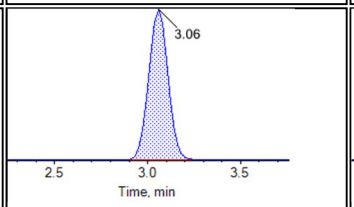
13C5-PFHxA



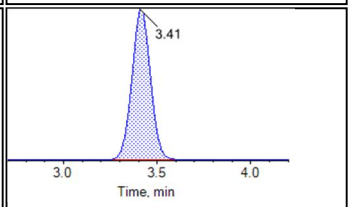
13C4-PFHpA



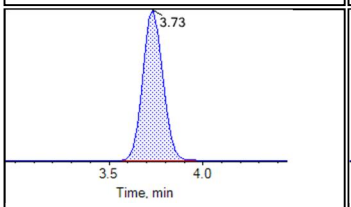
13C8-PFOA



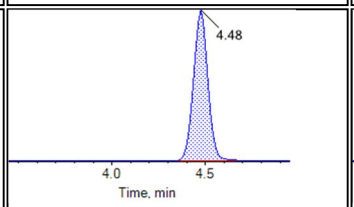
13C9-PFNA



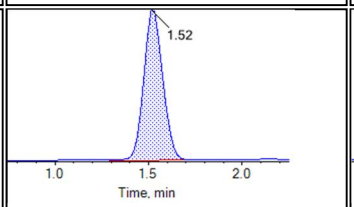
13C6-PFDA



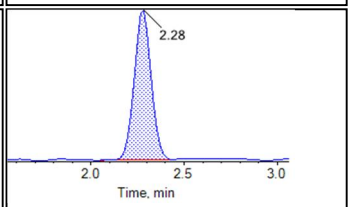
13C7-PFUnA



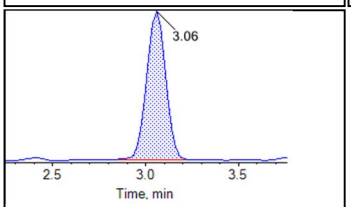
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

Created with Analyst Reporter
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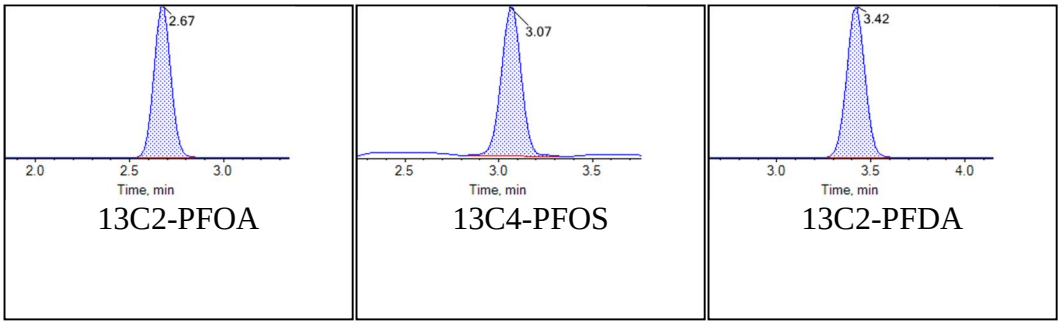
Internal Standards:



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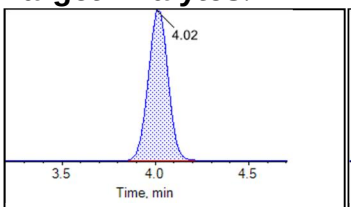
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:55:08 PM

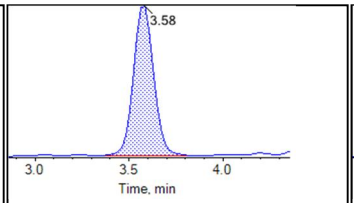
Sample Name	J8662-FS(3)	**Injection Vial**	38
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:31:37	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

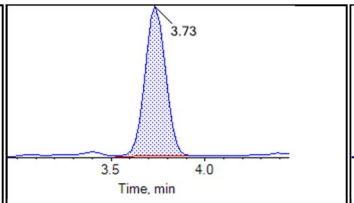
Target Analytes:



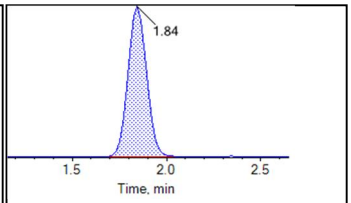
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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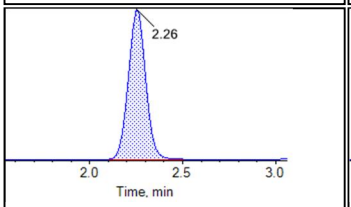

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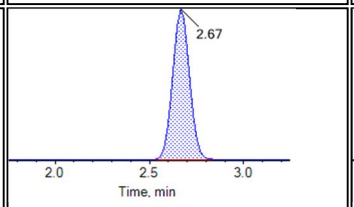

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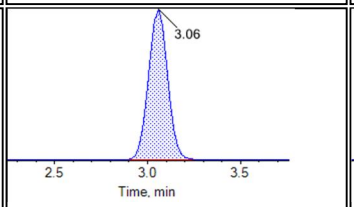
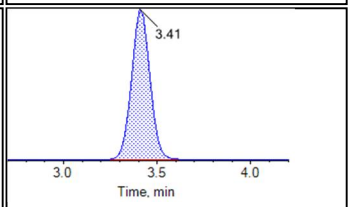
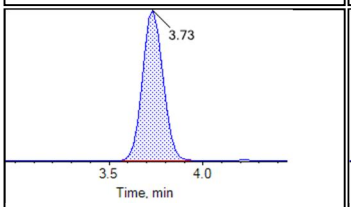


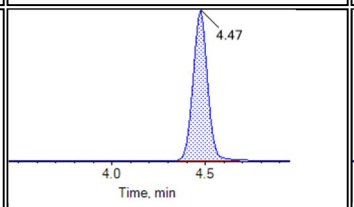
13C9-PFNA



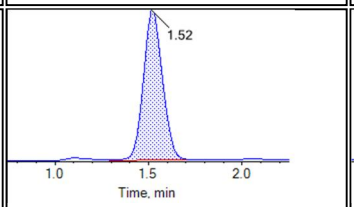
13C6-PFDA



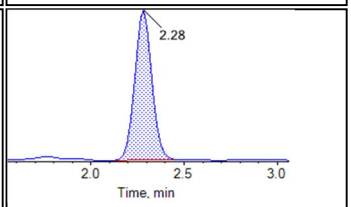
13C7-PFUnA



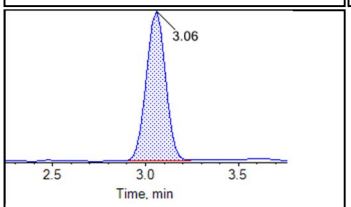
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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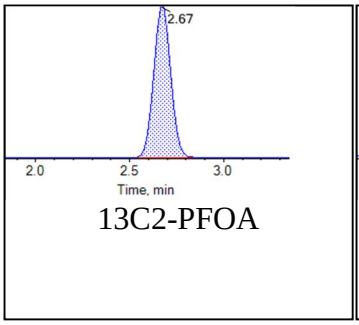
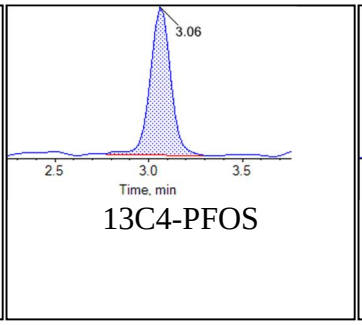
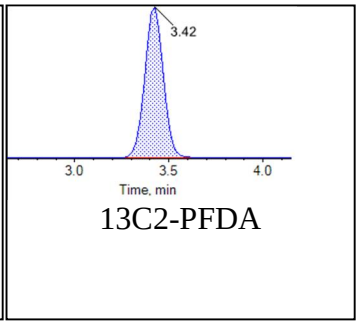


13C2-PFOA



13C4-PFOS



13C2-PFDA

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Chromatogram Report

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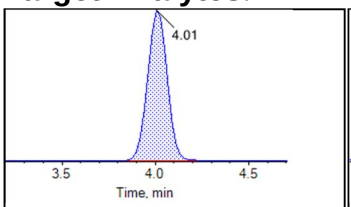
Printed: 24/10/2018 1:55:17 PM

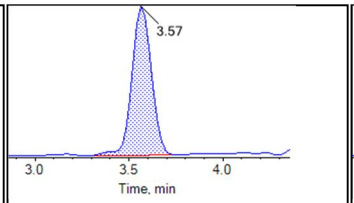
Sample Name	J8663-FS(3)	**Injection Vial**	39
Sample ID	VC-CS12-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:42:29	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

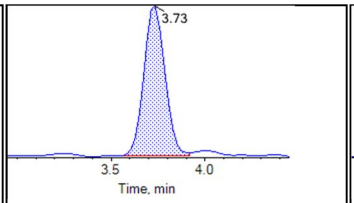
Target Analytes:



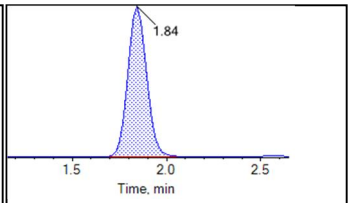
13C2-PFDoA



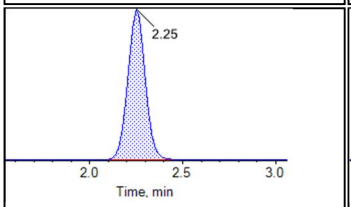
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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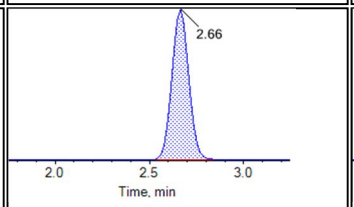
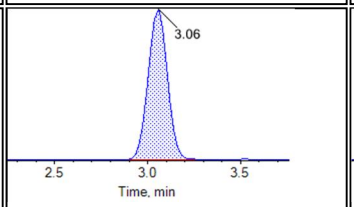
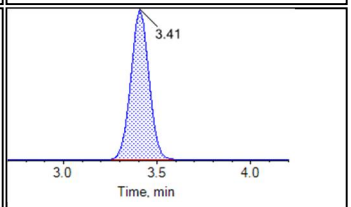


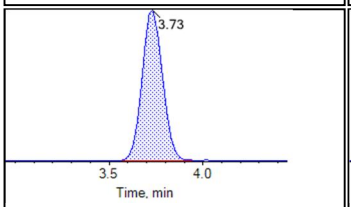
13C8-PFOA



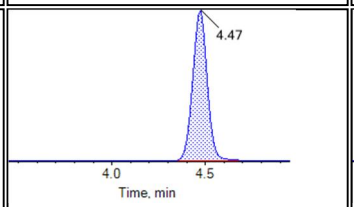
13C9-PFNA



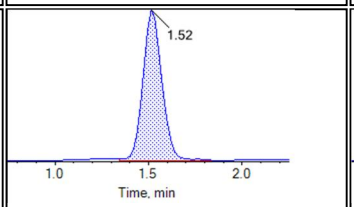
13C6-PFDA



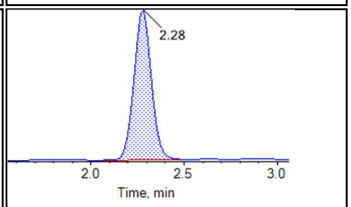
13C7-PFUnA



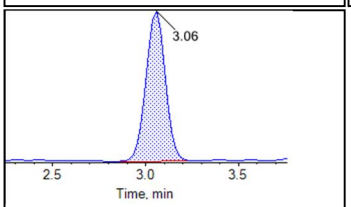
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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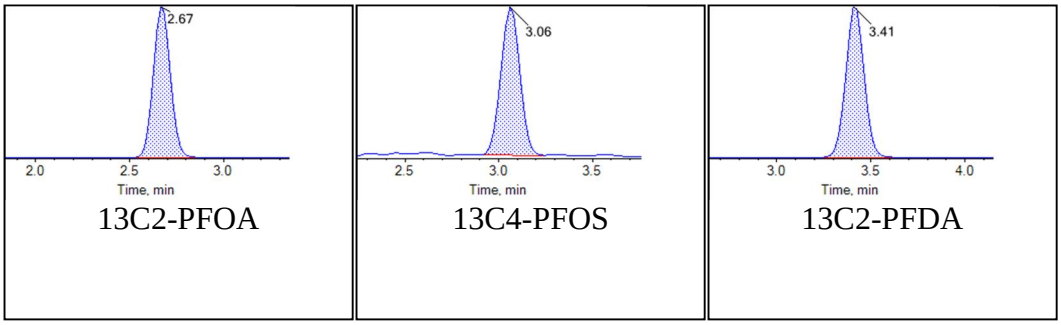

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Chromatogram Report

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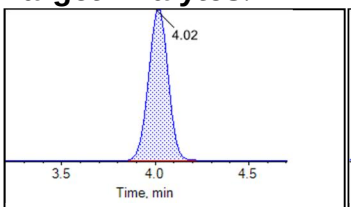
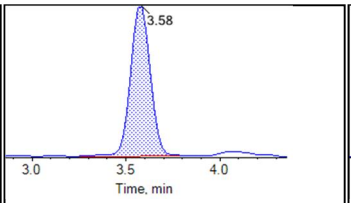
Sample Name	J8664-FS(3)	**Injection Vial**	40
Sample ID	VC-CS12-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:53:22	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

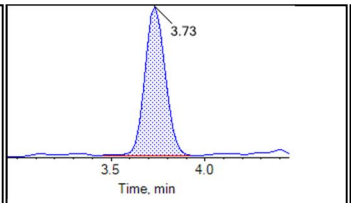
Target Analytes:



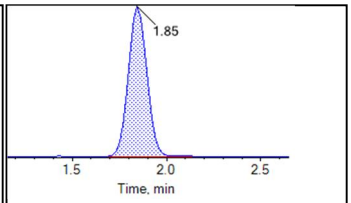
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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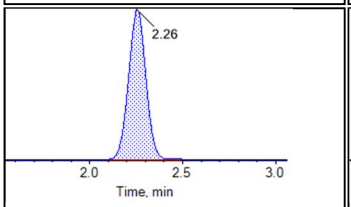
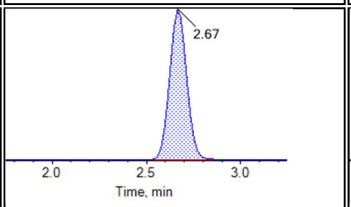
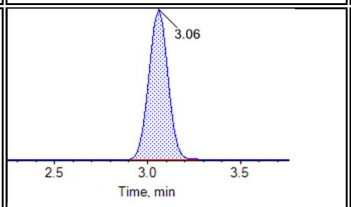


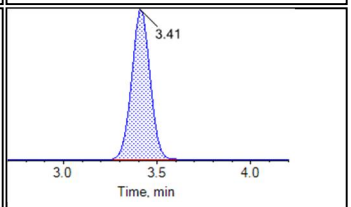
13C4-PFHpA



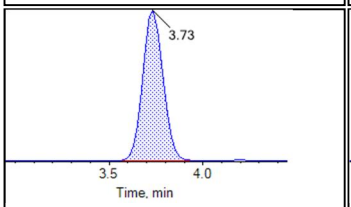
13C8-PFOA



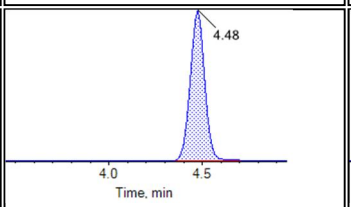
13C9-PFNA



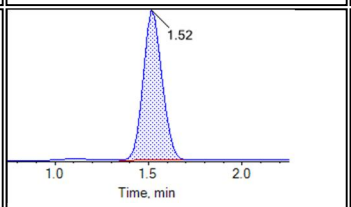
13C6-PFDA



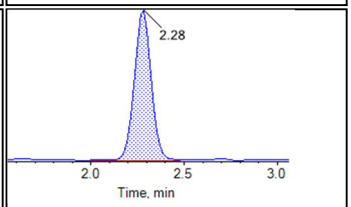
13C7-PFUnA



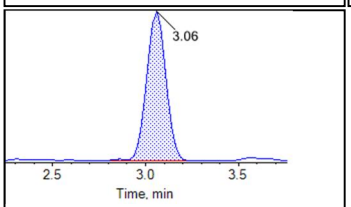
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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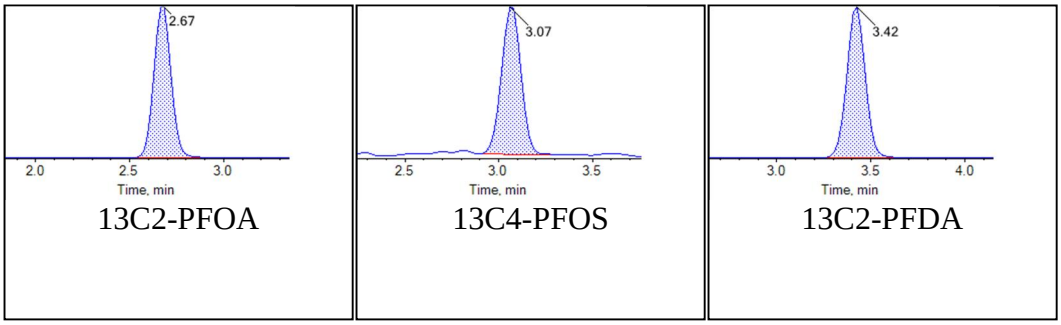

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Chromatogram Report

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Sample Name	KB77 CCV	**Injection Vial**	41
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:04:14	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

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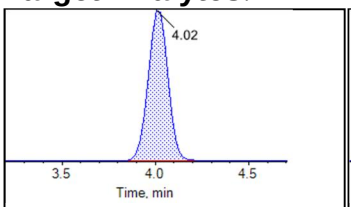
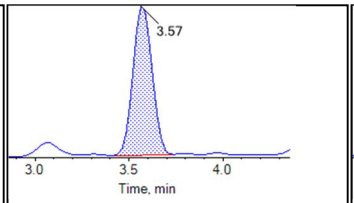
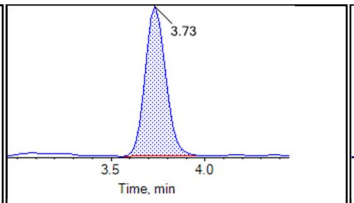


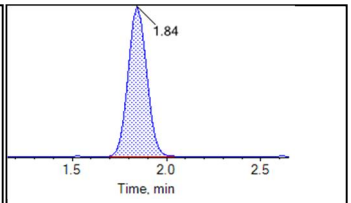
13C2-PFDoA



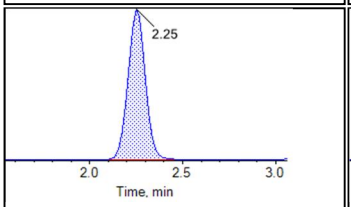
d3-MeFOSAA



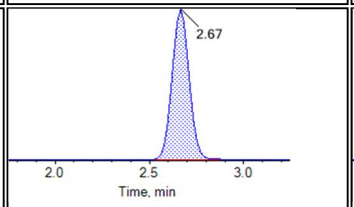
d5-EtFOSAA



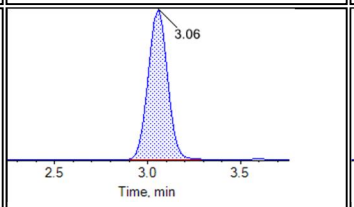
13C5-PFHxA



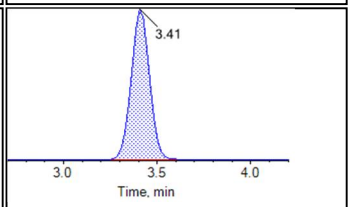
13C4-PFHpA



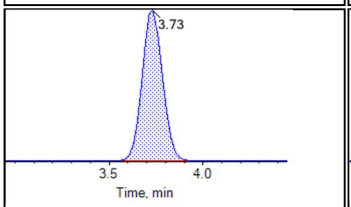
13C8-PFOA



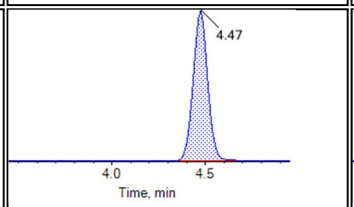
13C9-PFNA



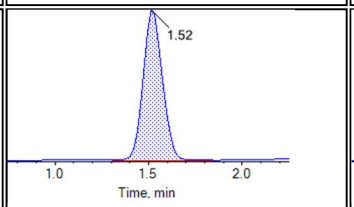
13C6-PFDA



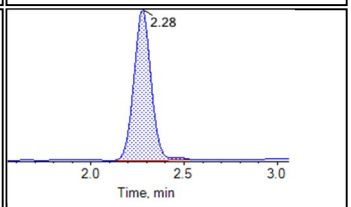
13C7-PFUnA



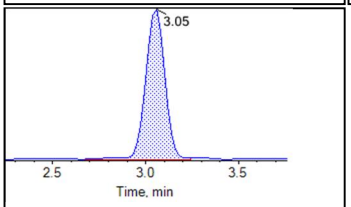
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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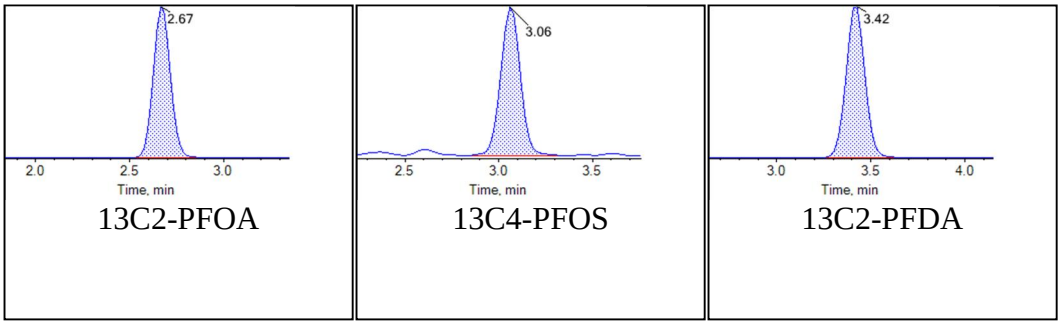
Internal Standards:



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Chromatogram Report

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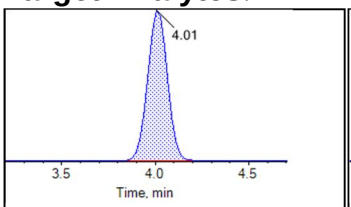
Printed: 24/10/2018 1:55:40 PM

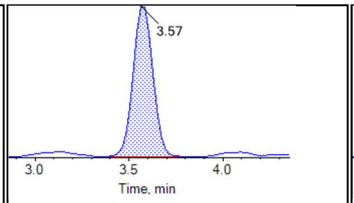
Sample Name	J8666-FS(3)	**Injection Vial**	43
Sample ID	VC-CS12-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:36:51	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

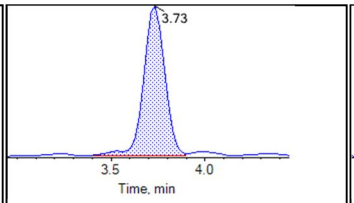
Target Analytes:



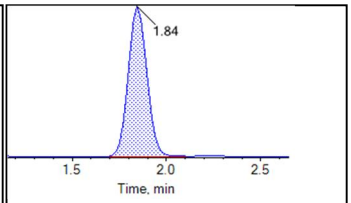
13C2-PFDoA



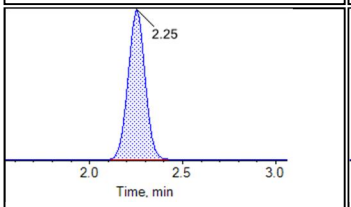
d3-MeFOSAA



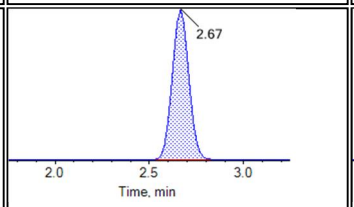
d5-EtFOSAA



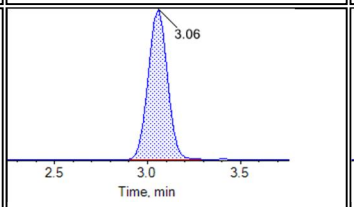
13C5-PFHxA



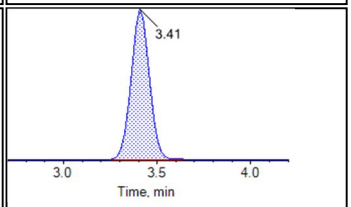
13C4-PFHpA



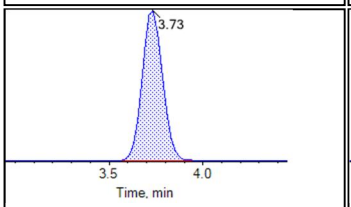
13C8-PFOA



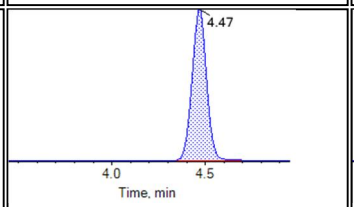
13C9-PFNA



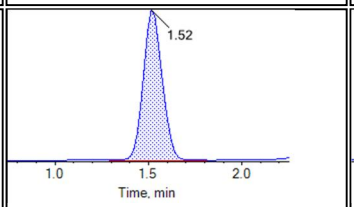
13C6-PFDA



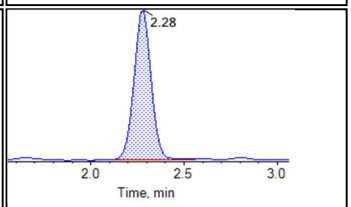
13C7-PFUnA



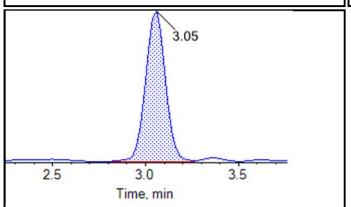
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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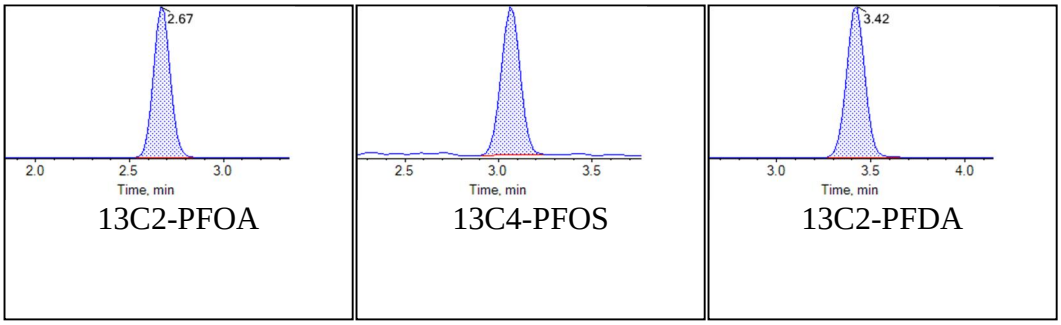
Printed: 24/10/2018 1:55:40 PM

Internal Standards:



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Chromatogram Report

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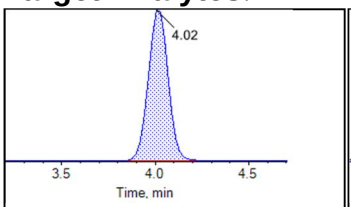
Printed: 24/10/2018 1:55:44 PM

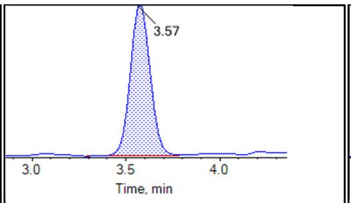
Sample Name	J8671-FS(3)	**Injection Vial**	44
Sample ID	VC-CS10-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:47:42	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

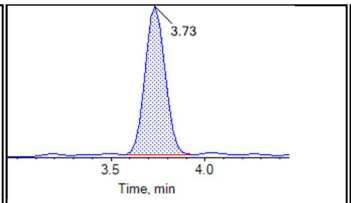
Target Analytes:



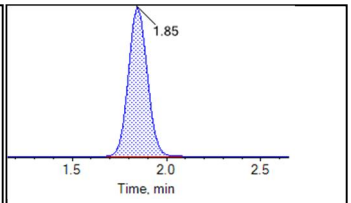
13C2-PFDoA



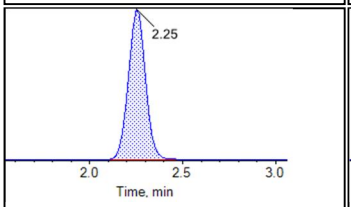
d3-MeFOSAA



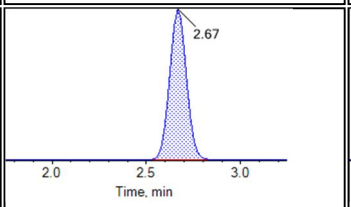
d5-EtFOSAA



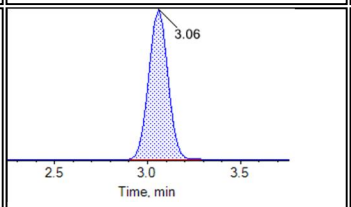
13C5-PFHxA



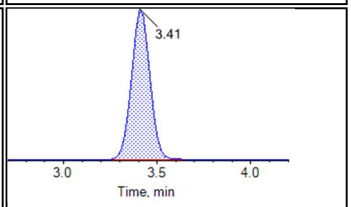
13C4-PFHpA



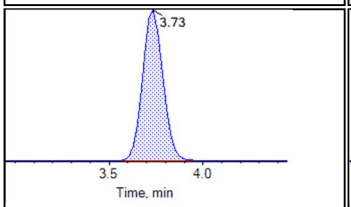
13C8-PFOA



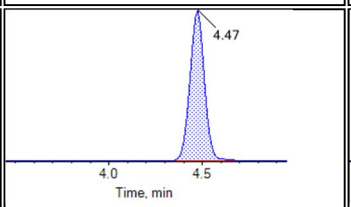
13C9-PFNA



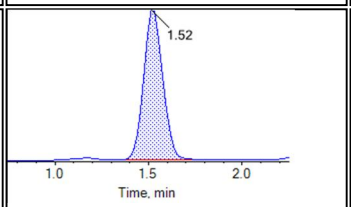
13C6-PFDA



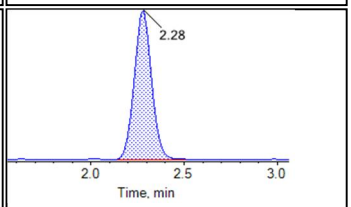
13C7-PFUnA



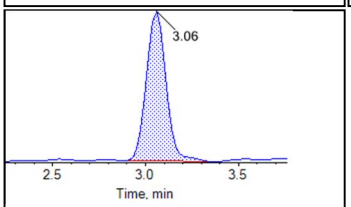
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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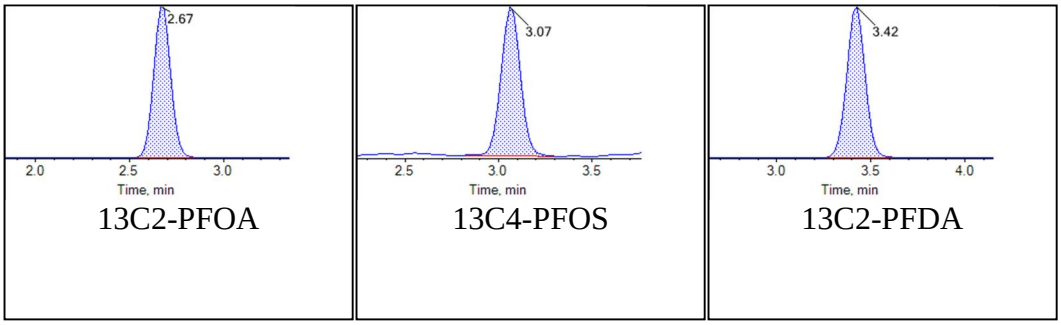
Printed: 24/10/2018 1:55:44 PM

Internal Standards:



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Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:55:48 PM

Sample Name	J8672-FS(3)	**Injection Vial**	45
Sample ID	VC-CS10-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:58:33	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

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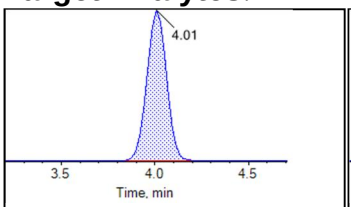
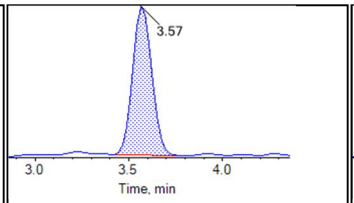
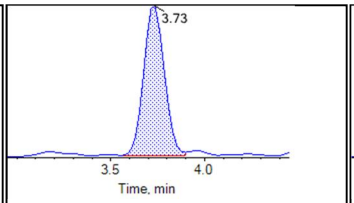


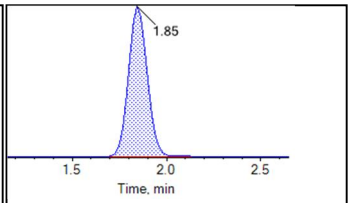
13C2-PFDoA



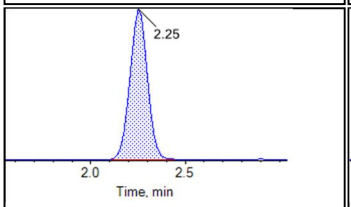
d3-MeFOSAA



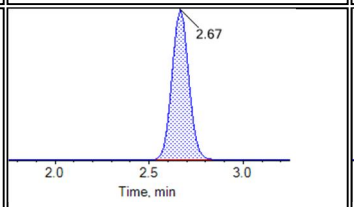
d5-EtFOSAA



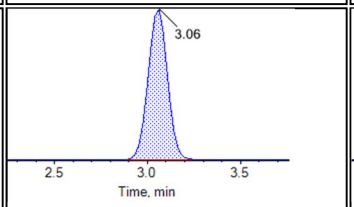
13C5-PFHxA



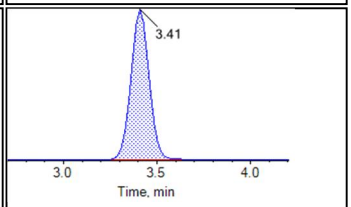
13C4-PFHpA



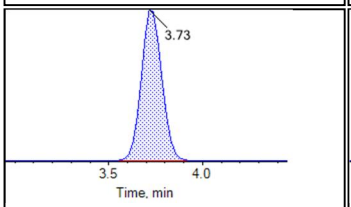
13C8-PFOA



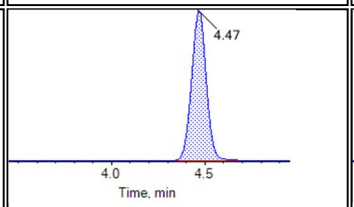
13C9-PFNA



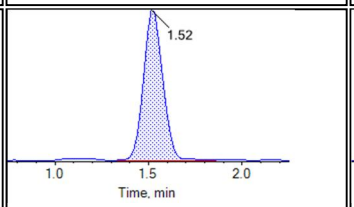
13C6-PFDA



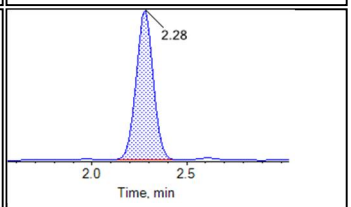
13C7-PFUnA



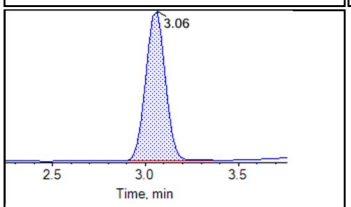
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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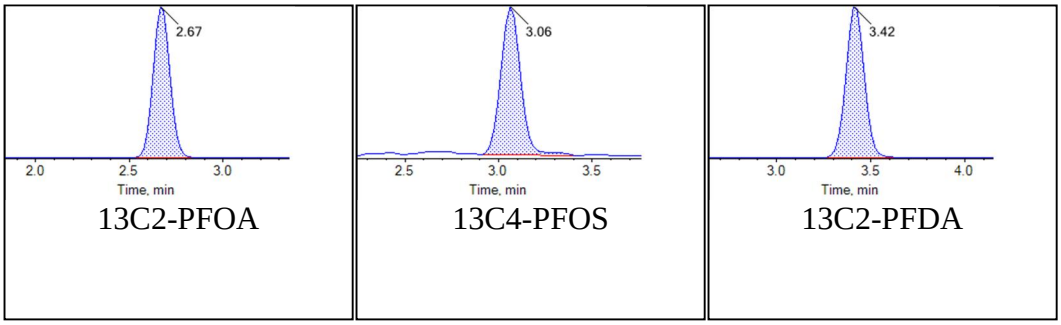
Printed: 24/10/2018 1:55:48 PM

Internal Standards:



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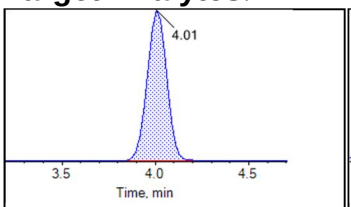
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:55:52 PM

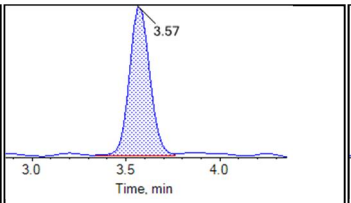
Sample Name	J8673-FS(3)	**Injection Vial**	46
Sample ID	VC-CS10-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:09:25	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

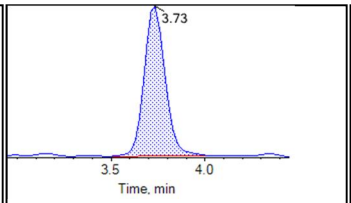
Target Analytes:



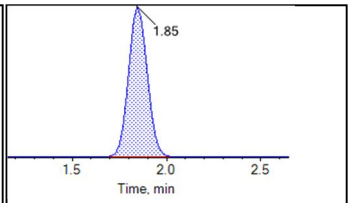
13C2-PFDoA



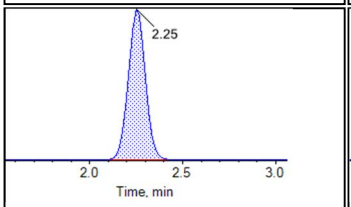
d3-MeFOSAA



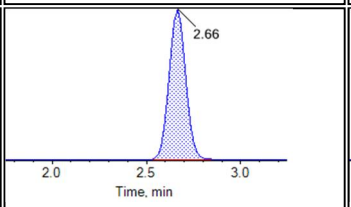
d5-EtFOSAA



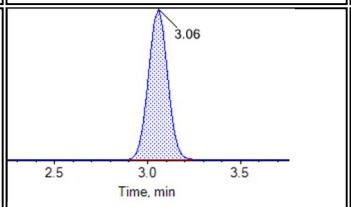
13C5-PFHxA



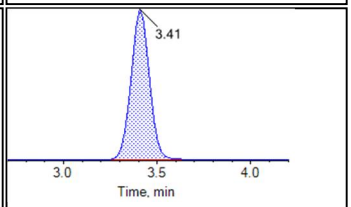
13C4-PFHpA



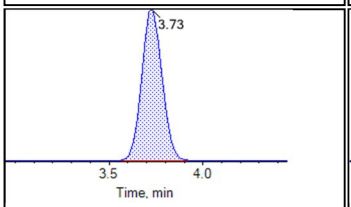
13C8-PFOA



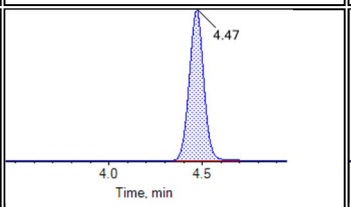
13C9-PFNA



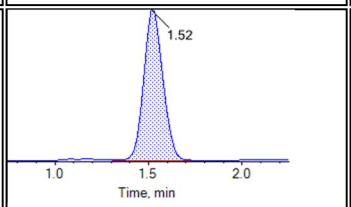
13C6-PFDA



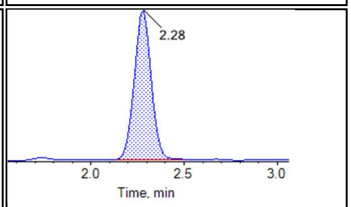
13C7-PFUnA



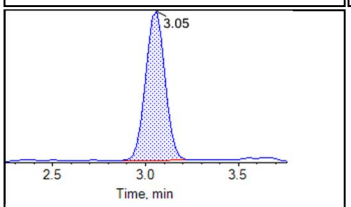
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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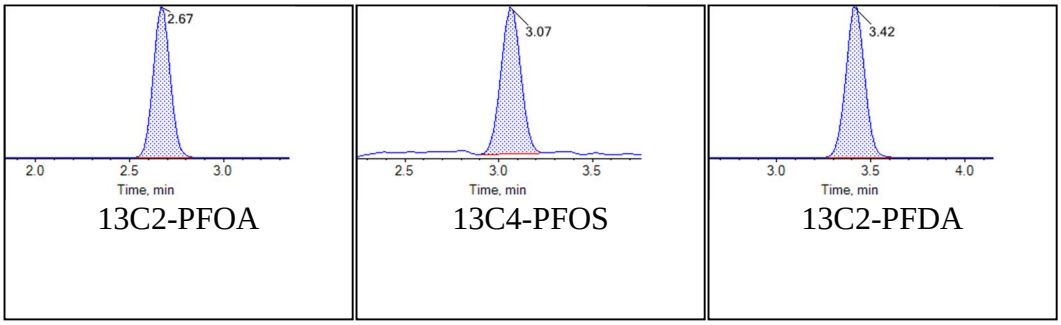
Printed: 24/10/2018 1:55:52 PM

Internal Standards:



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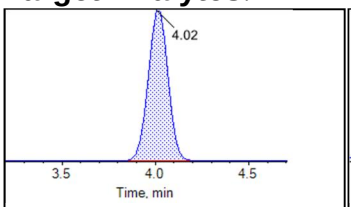
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:55:57 PM

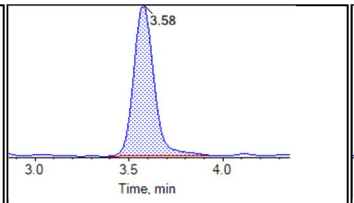
Sample Name	J8674-FS(3)	**Injection Vial**	47
Sample ID	VC-CS10-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:20:16	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

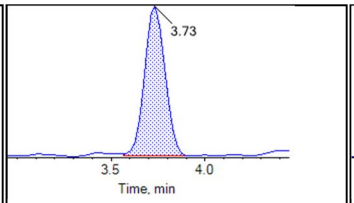
Target Analytes:



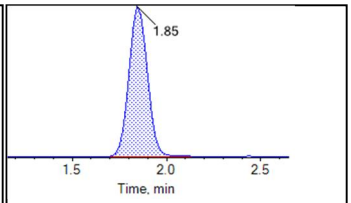
13C2-PFDoA



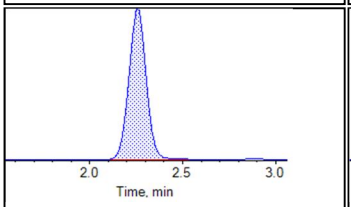
d3-MeFOSAA



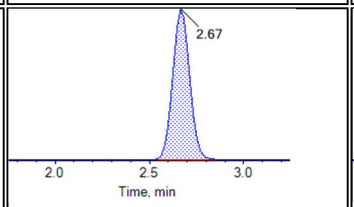
d5-EtFOSAA



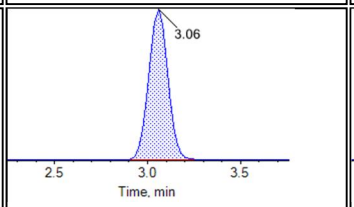
13C5-PFHxA



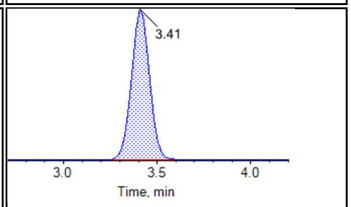
13C4-PFHpA



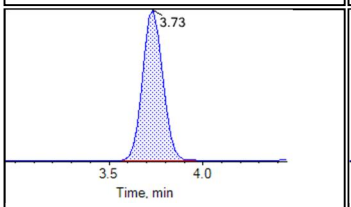
13C8-PFOA



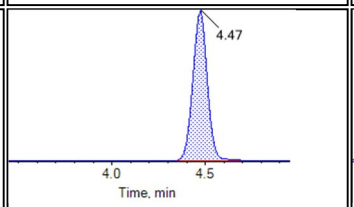
13C9-PFNA



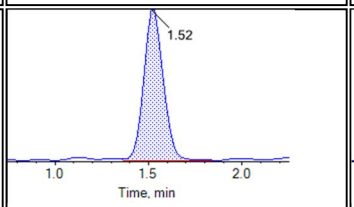
13C6-PFDA



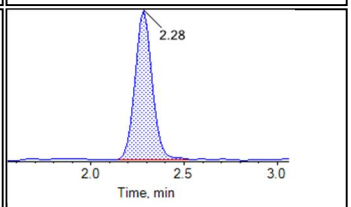
13C7-PFUnA



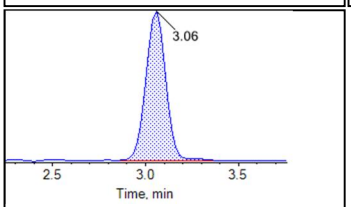
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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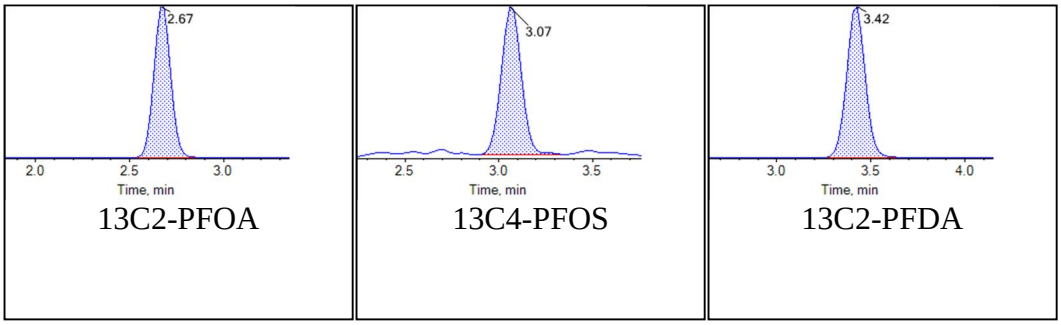
Printed: 24/10/2018 1:55:57 PM

Internal Standards:



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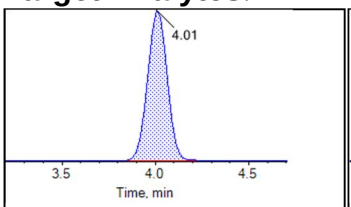
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:56:02 PM

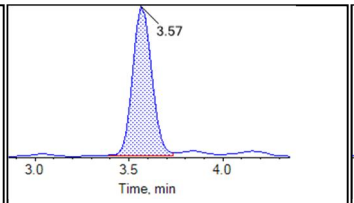
Sample Name	J8675-FS(3)	**Injection Vial**	48
Sample ID	VC-CS10-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:31:08	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

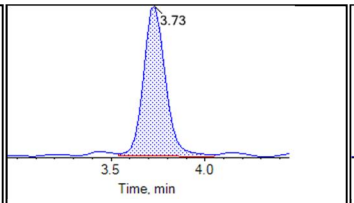
Target Analytes:



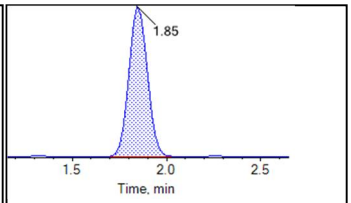
13C2-PFDoA



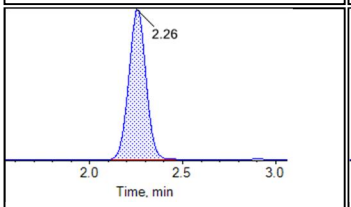
d3-MeFOSAA



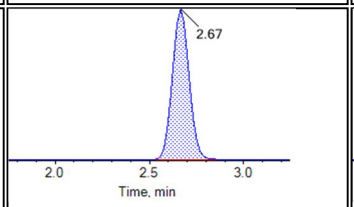
d5-EtFOSAA



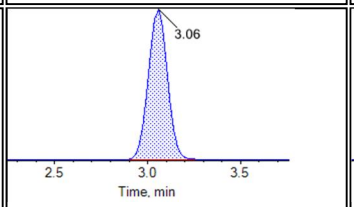
13C5-PFHxA



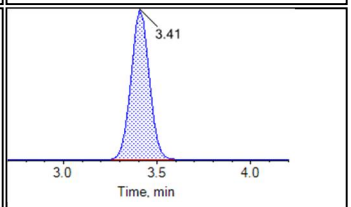
13C4-PFHpA



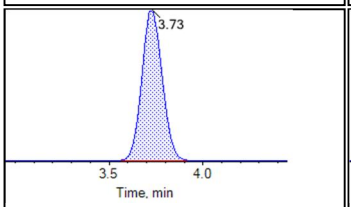
13C8-PFOA



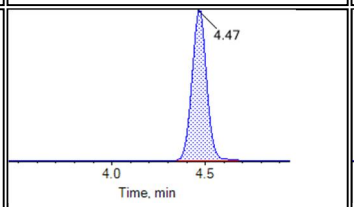
13C9-PFNA



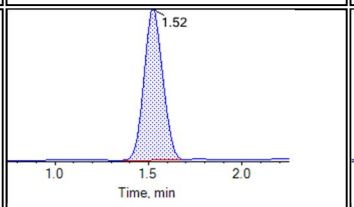
13C6-PFDA



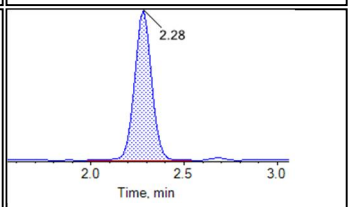
13C7-PFUnA



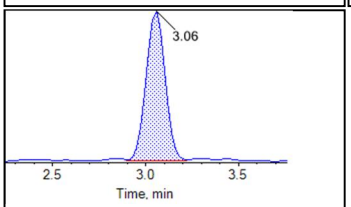
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

Chromatogram Report

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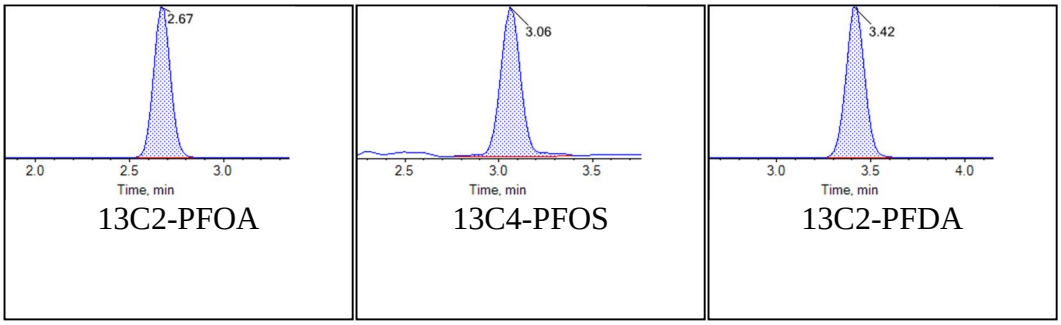
Internal Standards:



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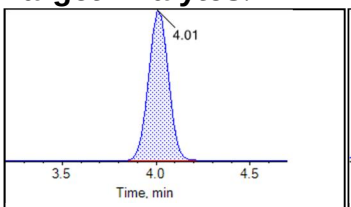
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:56:08 PM

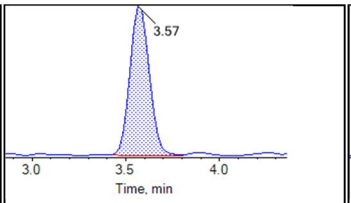
Sample Name	J8676-FS(3)	**Injection Vial**	49
Sample ID	VC-CS10-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:41:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

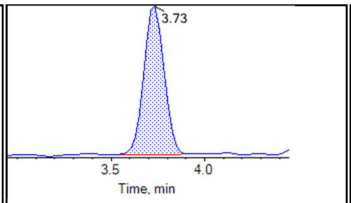
Target Analytes:



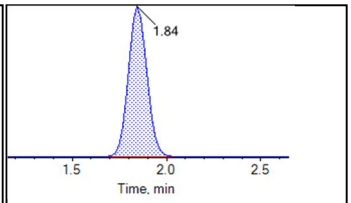
13C2-PFDoA



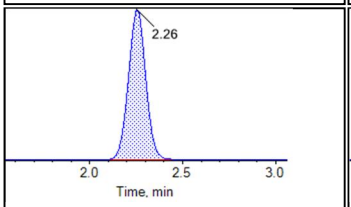
d3-MeFOSAA



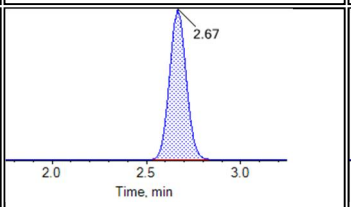
d5-EtFOSAA



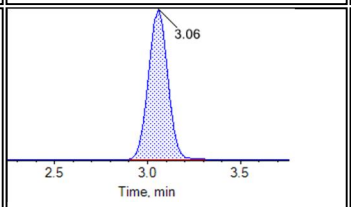
13C5-PFHxA



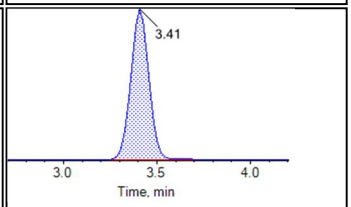
13C4-PFHpA



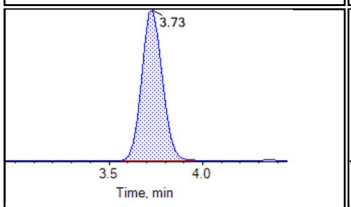
13C8-PFOA



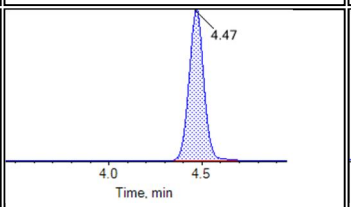
13C9-PFNA



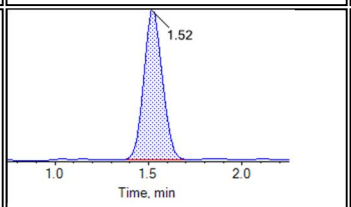
13C6-PFDA



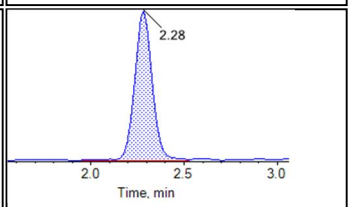
13C7-PFUnA



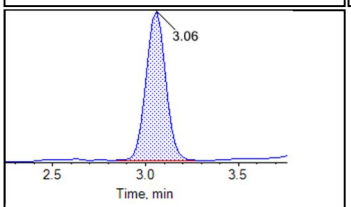
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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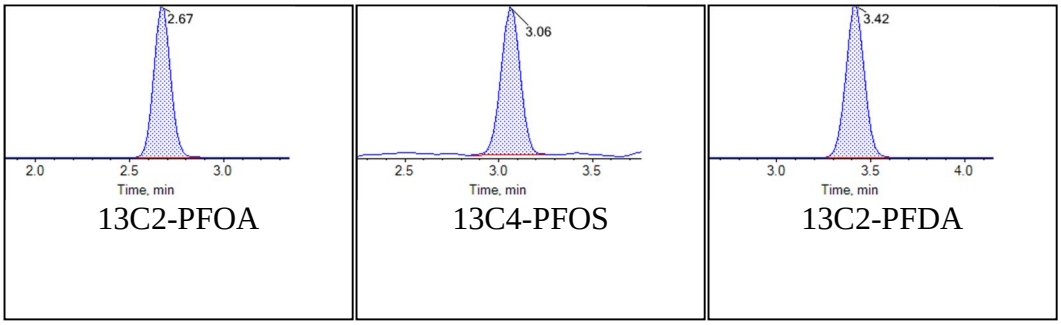
Printed: 24/10/2018 1:56:08 PM

Internal Standards:



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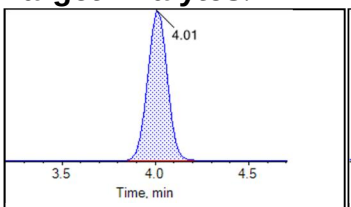
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:56:13 PM

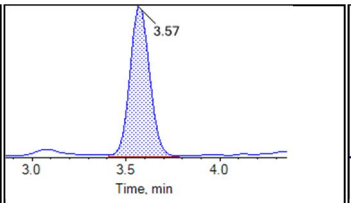
Sample Name	KB76 CCV	**Injection Vial**	50
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T03:52:52	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

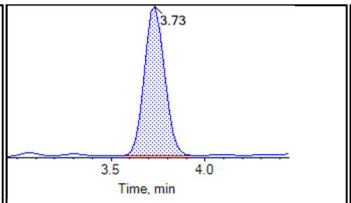
Target Analytes:



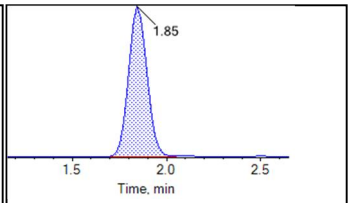
13C2-PFDoA



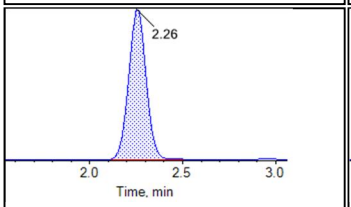
d3-MeFOSAA



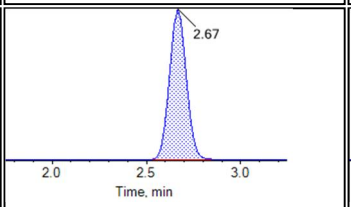
d5-EtFOSAA



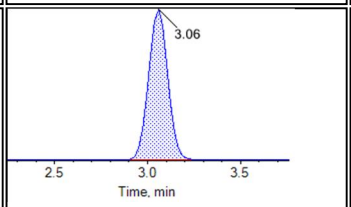
13C5-PFHxA



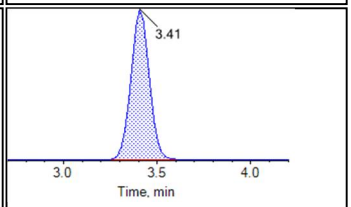
13C4-PFHpA



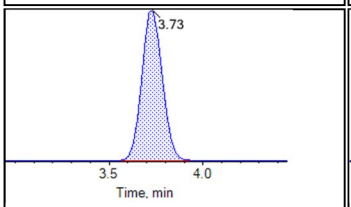
13C8-PFOA



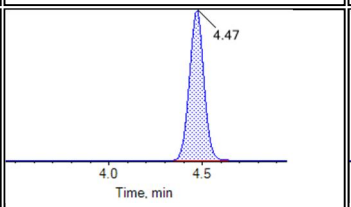
13C9-PFNA



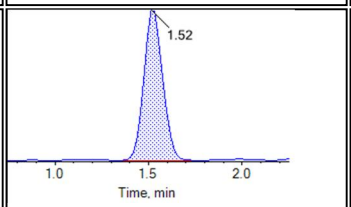
13C6-PFDA



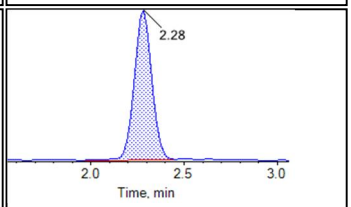
13C7-PFUnA



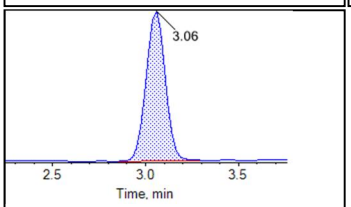
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
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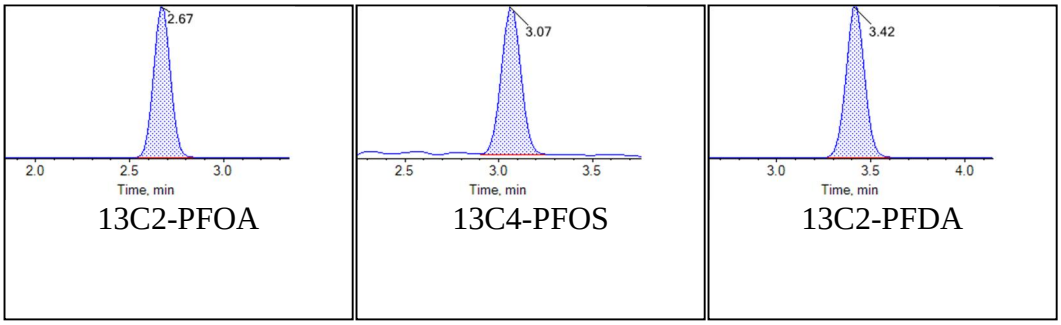
Internal Standards:



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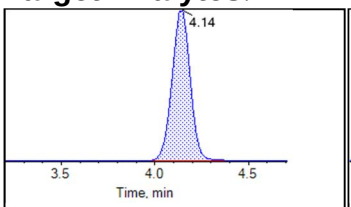
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:58:10 PM

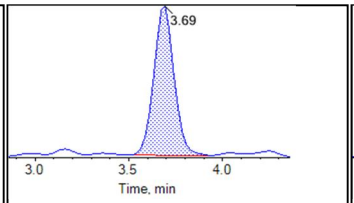
Sample Name	KB75 ISC	**Injection Vial**	1
Sample ID	ISC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T19:32:46	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

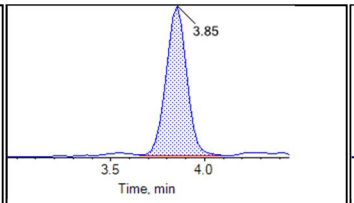
Target Analytes:



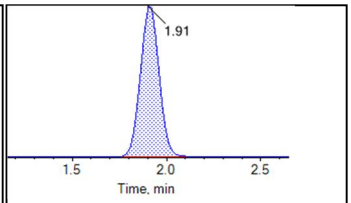
13C2-PFDoA



d3-MeFOSAA



d5-EtFOSAA



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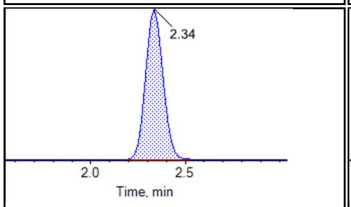

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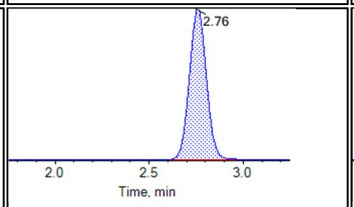

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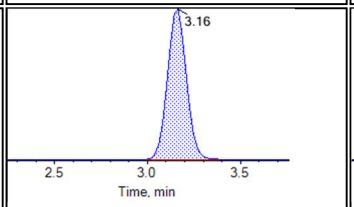
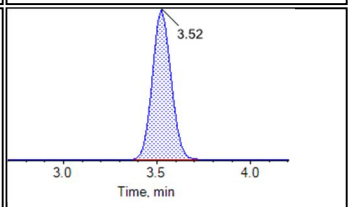
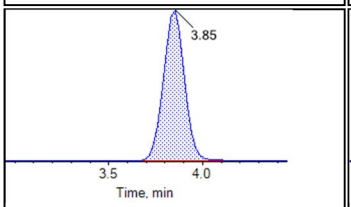


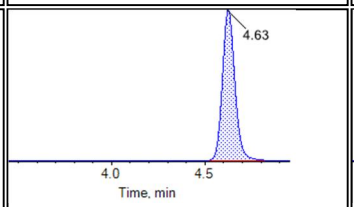
13C9-PFNA



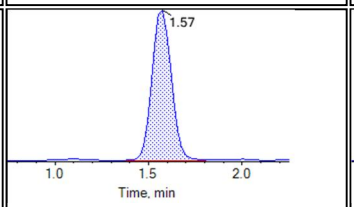
13C6-PFDA



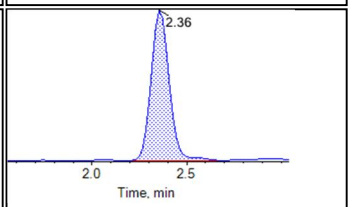
13C7-PFUnA



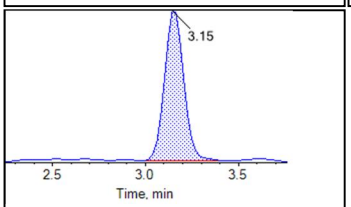
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:58:10 PM

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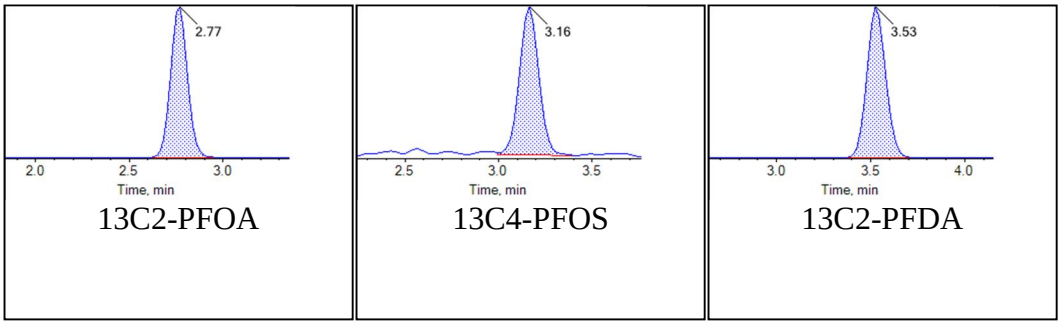

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Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:58:14 PM

Sample Name	KB80 IB	**Injection Vial**	2
Sample ID	IB	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T19:43:39	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

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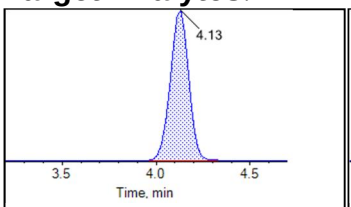
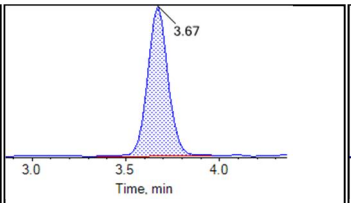
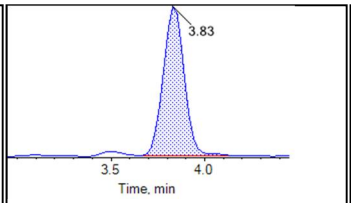


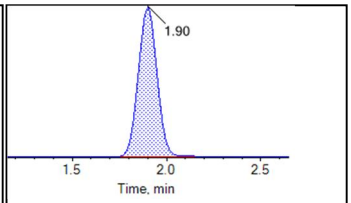
13C2-PFDoA



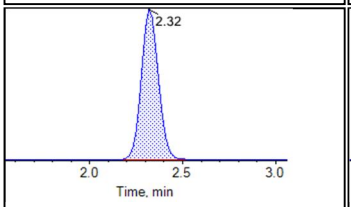
d3-MeFOSAA



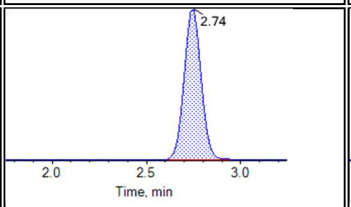
d5-EtFOSAA



13C5-PFHxA



13C4-PFHpA



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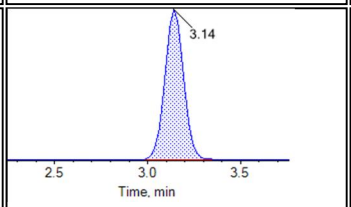
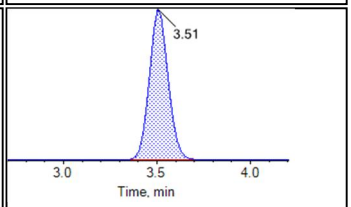
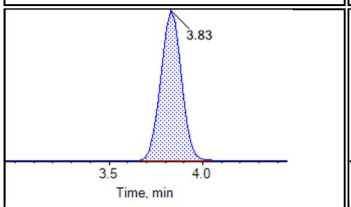


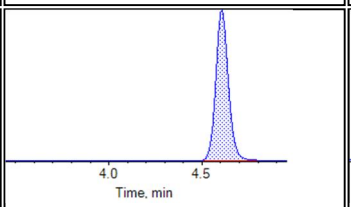
13C9-PFNA



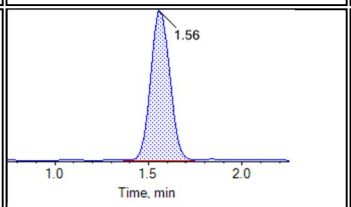
13C6-PFDA



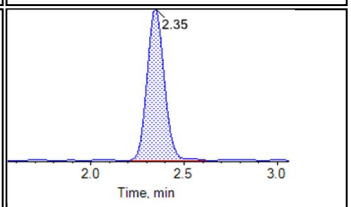
13C7-PFUnA



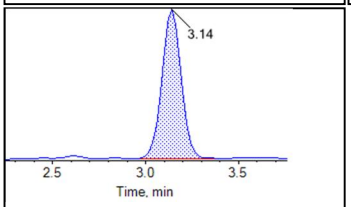
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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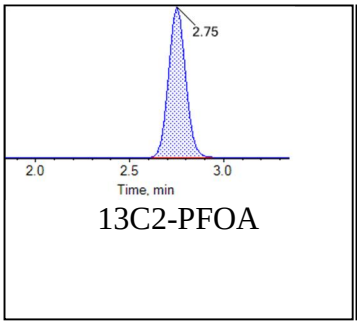
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:58:14 PM

Internal Standards:



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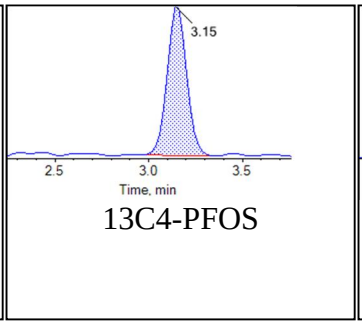

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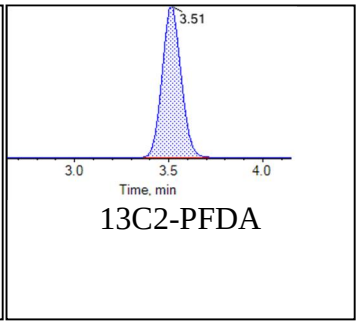

13C2-PFDA

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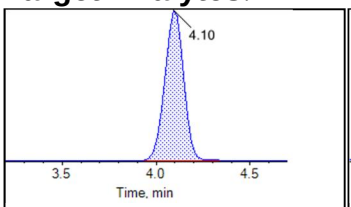
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:58:22 PM

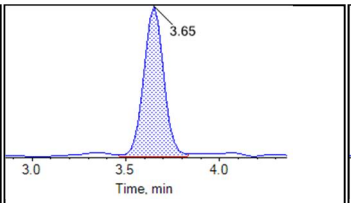
Sample Name	J8665-FS(3)	**Injection Vial**	5
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T20:16:16	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

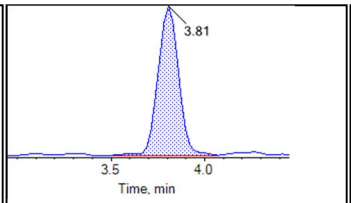
Target Analytes:



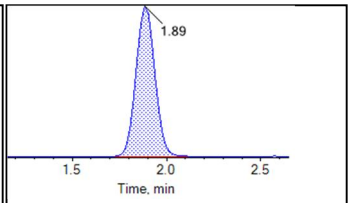
13C2-PFDoA



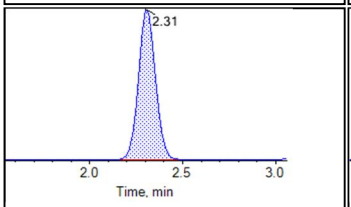
d3-MeFOSAA



d5-EtFOSAA



13C5-PFHxA



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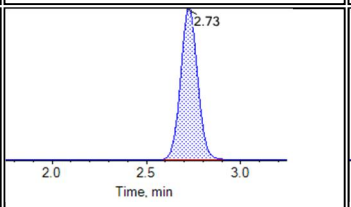
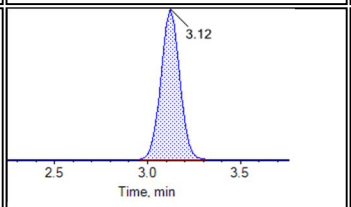
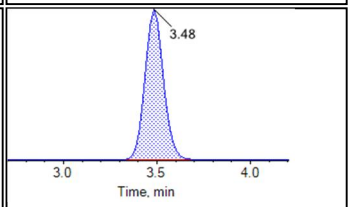


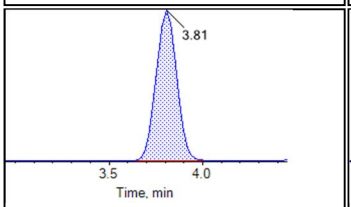
13C8-PFOA



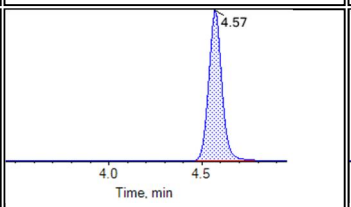
13C9-PFNA



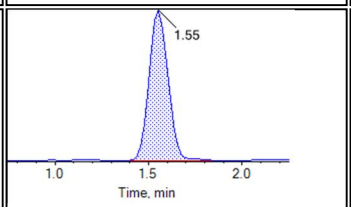
13C6-PFDA



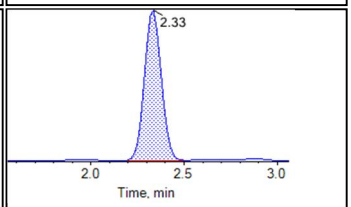
13C7-PFUnA



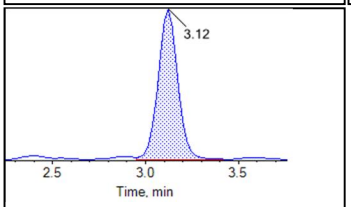
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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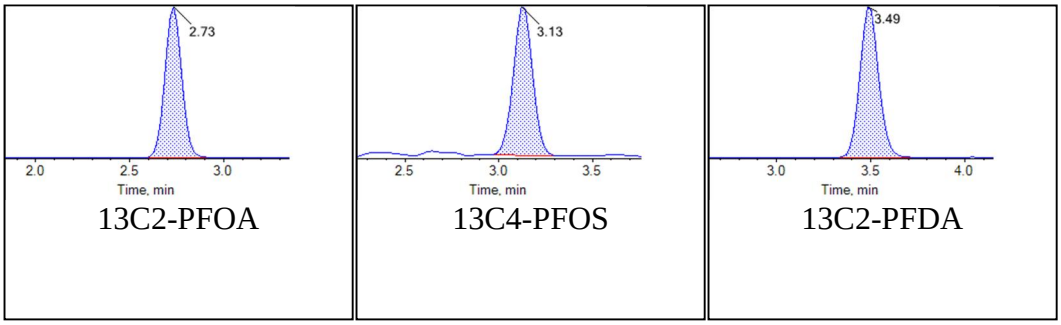
Printed: 24/10/2018 1:58:22 PM

Internal Standards:



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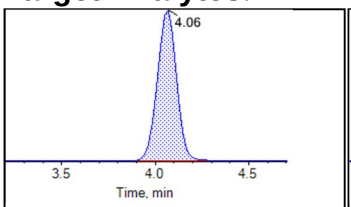
Chromatogram Report

Created with Analyst Reporter
Printed: 24/10/2018 1:59:01 PM

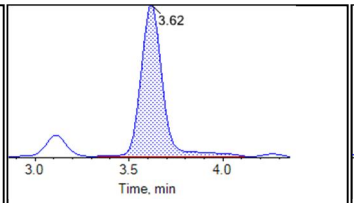
Sample Name	KB77 CCV	**Injection Vial**	13
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-22T21:43:12	**Data File**	10222018_5500.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_SIS
Sample Comment			

Chromatograms

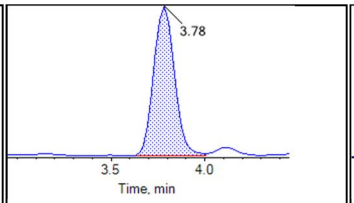
Target Analytes:



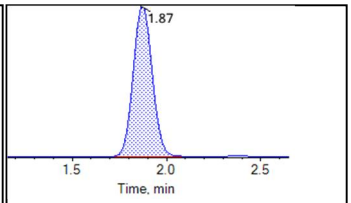
13C2-PFDoA



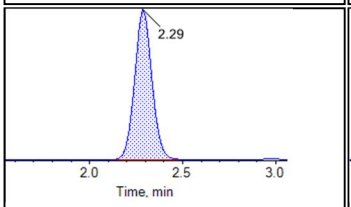
d3-MeFOSAA



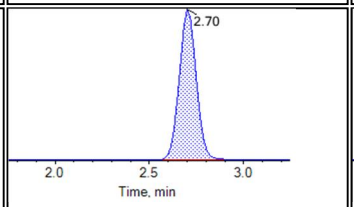
d5-EtFOSAA



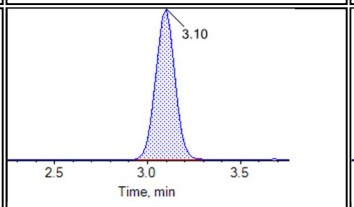
13C5-PFHxA



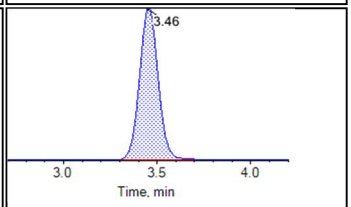
13C4-PFHpA



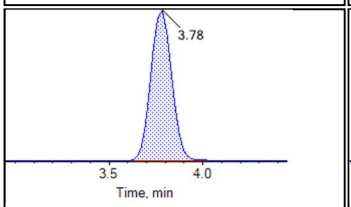
13C8-PFOA



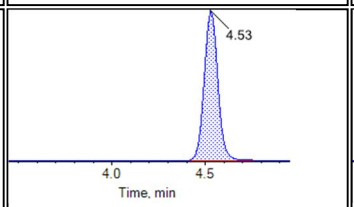
13C9-PFNA



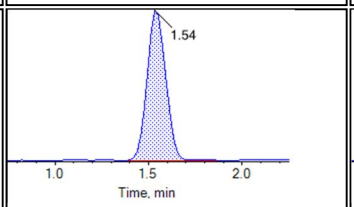
13C6-PFDA



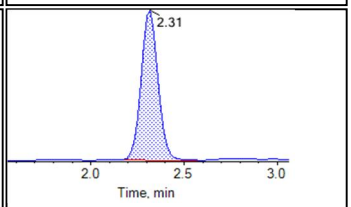
13C7-PFUnA



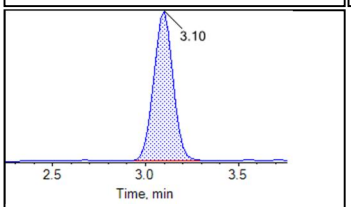
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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Chromatogram Report

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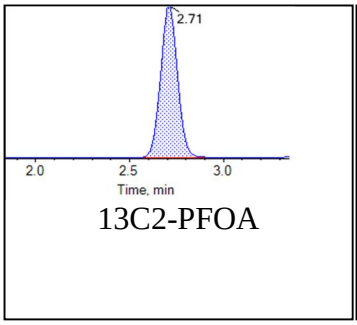
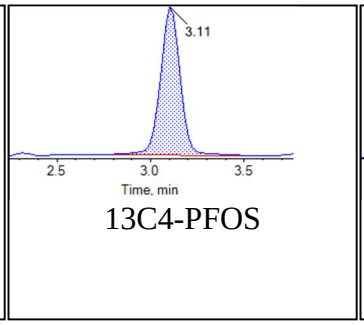
Printed: 24/10/2018 1:59:01 PM

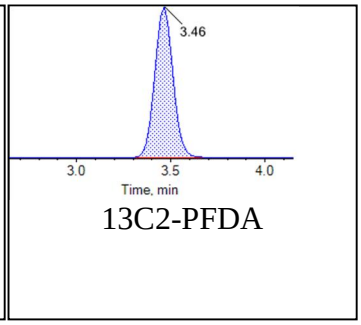
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

Unused Data

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:36:28 PM

Sample Name	J8662-FS-D(5)	**Injection Vial**	37
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:20:44	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	9891.43	23.313839	49.5	false
PFBS_2	298.9 / 99.0	1.54	2725.42	23.378635	46.1	true
PFHxA_1	313.0 / 269.0	1.86	28379.94	91.347612	19.4	false
PFHxA_2	313.0 / 119.0	1.86	2589.63	102.487767	14.7	false
PFHpA_1	363.0 / 319.0	2.27	21553.75	67.531512	45.5	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	219024.87	588.679582	200.3	false
PFHxS_2	399.0 / 99.0	2.29	61263.85	585.455678	268.9	false
PFOA_1	413.0 / 369.0	2.68	115724.75	321.314368	169.5	false
PFOA_2	413.0 / 169.0	2.65	10360.94	449.459665	104.2	true
PFNA_1	463.0 / 419.0	3.08	6372.30	< 0	35.9	false
PFNA_2	463.0 / 219.0	3.08	2329.29	< 0	25.5	false
PFOS_1	499.0 / 80.0	3.07	92626.71	177.654305	62.1	false
PFOS_2	499.0 / 99.0	3.07	15028.59	164.751888	109.4	false
PFDA_1	513.0 / 469.0	3.41	1282.40	< 0	13.1	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.76	1069.41	< 0	14.2	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	4.28	612.94	< 0	19.7	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

Created with Analyst Reporter
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Sample Name	J8665-FS(3)	**Injection Vial**	42
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:25:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	1729.64	< 0	13.2	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	2.27	8881.39	17.724015	25.0	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.29	58473.33	165.947522	130.7	false
PFHxS_2	399.0 / 99.0	2.29	15981.39	157.070875	117.2	false
PFOA_1	413.0 / 369.0	2.68	34477.01	84.313844	72.1	false
PFOA_2	413.0 / 169.0	2.68	2838.10	111.669997	40.5	false
PFNA_1	463.0 / 419.0	3.08	5428.22	< 0	29.1	false
PFNA_2	463.0 / 219.0	3.07	1658.80	< 0	31.7	false
PFOS_1	499.0 / 80.0	3.03	104966.93	229.175296	55.3	false
PFOS_2	499.0 / 99.0	3.07	14976.49	187.269626	100.6	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	4.03	751.72	< 0	12.5	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	4.27	739.44	< 0	23.6	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.47	695.50	< 0	15.7	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	J8662-FS-D(5)	**Injection Vial**	37
Sample ID	VC-CS12-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T01:20:44	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	86709.54	214.001624	1378.8	false
d3-MeFOSAA	573.0 / 419.0	3.58	11533.44	184.224583	189.2	false
d5-EtFOSAA	589.0 / 419.0	3.74	13678.67	192.489084	188.2	false
13C5-PFHxA	318.0 / 273.0	1.85	57537.57	216.838907	551.0	false
13C4-PFHpA	367.0 / 322.0	2.26	70771.51	234.433170	866.2	false
13C8-PFOA	421.0 / 376.0	2.67	85744.43	233.489089	16773.8	false
13C9-PFNA	472.0 / 427.0	3.06	88240.75	210.438122	36146.3	false
13C6-PFDA	519.0 / 474.0	3.41	94296.18	230.996662	1519.4	false
13C7-PFUnA	570.0 / 525.0	3.73	88786.11	235.455594	774.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	79707.70	243.654814	1532.8	false
13C3-PFBS	302.0 / 99.0	1.52	27358.07	239.872981	382.1	false
13C3-PFHxS	402.0 / 99.0	2.28	25285.81	244.664525	267.1	false
13C8-PFOS	507.0 / 99.0	3.06	25627.11	219.502788	251.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 24/10/2018 1:30:44 PM

Sample Name	J8665-FS(3)	**Injection Vial**	42
Sample ID	VC-CS12-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-20T02:25:59	**Data File**	10192018.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0610_18-0611_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	92528.81	223.731554	1386.9	false
d3-MeFOSAA	573.0 / 419.0	3.58	8672.48	132.017155	152.4	false
d5-EtFOSAA	589.0 / 419.0	3.73	8498.58	113.974284	155.3	true
13C5-PFHxA	318.0 / 273.0	1.85	56723.72	212.493812	857.6	false
13C4-PFHpA	367.0 / 322.0	2.26	68430.89	225.324626	885.5	false
13C8-PFOA	421.0 / 376.0	2.67	86408.60	233.891023	1423.5	false
13C9-PFNA	472.0 / 427.0	3.06	84594.88	200.537314	2184.0	false
13C6-PFDA	519.0 / 474.0	3.41	86970.06	208.728333	791.3	false
13C7-PFUnA	570.0 / 525.0	3.73	89048.15	231.360359	829.8	false
13C2-PFTeDA	715.0 / 670.0	4.48	71754.56	214.893996	1829.0	false
13C3-PFBS	302.0 / 99.0	1.52	26006.61	217.309134	373.2	false
13C3-PFHxS	402.0 / 99.0	2.28	22461.53	207.124635	320.7	false
13C8-PFOS	507.0 / 99.0	3.06	22750.61	185.708505	224.8	false

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_	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
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluoroh	307-24-4	0.96	NG_G	U			TRG					20171116		0.32	0.32	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluoro	375-85-9	0.96	NG_G	U			TRG					20171116		0.42	0.42	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluoroo	335-67-1	0.96	NG_G	U			TRG					20171116		0.48	0.48	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluoro	375-95-1	0.96	NG_G	U			TRG					20171116		0.41	0.41	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluorod	335-76-2	0.96	NG_G	U			TRG					20171116		0.26	0.26	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluorou	2058-94-8	0.96	NG_G	U			TRG					20171116		0.39	0.39	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluorod	307-55-1	0.48	NG_G	U			TRG					20171116		0.23	0.23	5.1		70	0.48	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluorot	r72629-94-8	0.96	NG_G	U			TRG					20171116		0.27	0.27	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluorot	376-06-7	1.91	NG_G	U			TRG					20171116		0.6	0.6	5.1		70	1.91	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		N-Methyl	F2355-31-9	2.39	NG_G	U			TRG					20171116		1.07	1.07	5.1		70	2.39	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		N-Ethyl P	er2991-50-6	1.91	NG_G	U			TRG					20171116		0.55	0.55	5.1		70	1.91	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluorob	375-73-5	0.96	NG_G	U			TRG					20171116		0.34	0.34	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluoroh	355-46-4	0.48	NG_G	U			TRG					20171116		0.21	0.21	5.1		70	0.48	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		Perfluoro	1763-23-1	0.96	NG_G	U			TRG					20171116		0.26	0.26	5.1		70	0.96	4.78	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C5-PFH	x BDO-2217	87	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C4-PFH	p BDO-2218	92	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C8-PFO	A BDO-2219	91	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C9-PFN	A BDO-2221	78	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C6-PFD	A BDO-2222	95	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C7-PFU	n BDO-2223	101	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C2-PFD	o BDO-2112	96	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C2-PFT	e BDO-2224	100	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		d3-MeFOS	BDO-1838	72	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		d5-EtFOSA	BDO-1839	77	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C3-PFB	S BDO-2226	99	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C3-PFH	x BDO-2227	99	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR988PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:15:33	CR988PB-F	10	1	0		13C8-PFO	S BDO-2228	97	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluoroh	307-24-4	109	PCT_REC				TRG	LSA	135	45	20171116			0.31	0.31	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluoro	375-85-9	109	PCT_REC				TRG	LSA	128	60	20171116			0.42	0.42	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluoroo	335-67-1	109	PCT_REC				TRG	LSA	136	56	20171116			0.48	0.48	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluoro	375-95-1	117	PCT_REC				TRG	LSA	130	54	20171116			0.41	0.41	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluorod	335-76-2	111	PCT_REC				TRG	LSA	141	55	20171116			0.26	0.26	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluorou	2058-94-8	102	PCT_REC				TRG	LSA	137	57	20171116			0.39	0.39	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluorod	307-55-1	114	PCT_REC				TRG	LSA	134	62	20171116			0.23	0.23	5.1			0.48	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluorot	r72629-94-8	109	PCT_REC				TRG	LSA	127	51	20171116			0.27	0.27	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluorot	376-06-7	112	PCT_REC				TRG	LSA	162	34	20171116			0.6	0.6	5.1			1.9	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		N-Methyl	F2355-31-9	137	PCT_REC				TRG	LSA	146	52	20171116			1.07	1.07	5.1			2.38	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		N-Ethyl P	er2991-50-6	103	PCT_REC				TRG	LSA	124	54	20171116			0.54	0.54	5.1			1.9	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluorob	375-73-5	101	PCT_REC				TRG	LSA	145	57	20171116			0.34	0.34	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluoroh	355-46-4	108	PCT_REC				TRG	LSA	132	52	20171116			0.21	0.21	5.1			0.48	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		Perfluoro	1763-23-1	105	PCT_REC				TRG	LSA	130	50	20171116			0.26	0.26	5.1			0.95	4.76	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C5-PFH	x BDO-2217	85	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C4-PFH	p BDO-2218	78	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C8-PFO	A BDO-2219	86	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C9-PFN	A BDO-2221	79	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C6-PFD	A BDO-2222	76	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C7-PFU	n BDO-2223	88	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C2-PFD	o BDO-2112	82	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C2-PFT	e BDO-2224	88	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		d3-MeFOS	BDO-1838	67	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		d5-EtFOSA	BDO-1839	83	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C3-PFB	S BDO-2226	105	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C3-PFH	x BDO-2227	97	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	CR989LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181011	20181011			20181011	14:45:00	20181020	00:26:25	CR989LCS-	10	1	0		13C8-PFO	S BDO-2228	91	PCT_REC				SURR	SLSP	150	50	20171116					5.1							18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	00:37:17	J8658-FS	10	1	1.99		Perfluoroh	307-24-4	1	NG_G	U			TRG					20171116		0.33	0.33	5.1		70	1	5	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	00:37:17	J8658-FS	10	1	1.99		Perfluoro	375-85-9	1	NG_G	U			TRG					20171116		0.44	0.44	5.1		70	1	5	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	00:37:17	J8658-FS	10	1	1.99		Perfluoroo	335-67-1	1	NG_G	U			TRG					20171116		0.5	0.5	5.1		70	1	5	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	00:37:17	J8658-FS	10	1	1.99		Perfluoro	375-95-1	1	NG_G	U			TRG					20171116		0.43	0.43	5.1		70	1	5	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	00:37:17	J8658-FS	10	1	1.99		Perfluorod	335-76-2	1	NG_G	U			TRG					20171116		0.27	0.27	5.1		70	1	5	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	00:37:17	J8658-FS	10	1	1.99		Perfluorou	2058-94-8	1	NG_G	U			TRG					20171116		0.41	0.41	5.1		70	1	5	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	00:37:17	J8658-FS	10	1	1.99		Perfluorod	307-55-1	0.5	NG_G	U			TRG					20171116		0.24	0.24	5.1		70	0.5	5	18-0610	D

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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_	QC_Colum	Analysis_R	Result_Nar	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL		Detection_Q	SQM_Vers	DL		LOD		LOQ		SDG	Analysis_B	Validator_	Val_Date
N62470161	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	00:59:00	J8660-FS	10	1	25.42		Perfluorot	376-06-7	2.41	NG_G	U		TRG					20171116		0.76	0.76	5.1	70	2.41	6.02	18-0610	DP-18-0306				

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_	GC_Colum	Analysis_R	Result_Nat	QC_Contro	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL	Detection_Q	SQM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_	Val_Date
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C8-PFO	A BDO-2219		92	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C9-PFN	A BDO-2221		77	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C6-PFD	A BDO-2222		85	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C7-PFU	nDO-2223		90	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C2-PFD	oBDO-2112		85	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C2-PFT	e BDO-2224		89	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	d3-MeFOS	BDO-1838		66	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	d5-EtFOS	A BDO-1839		63	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C3-PFB	S BDO-2226		86	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C3-PFH	x BDO-2227		87	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	01:53:22	J8664-FS	10	1	2.18	13C8-PFO	S BDO-2228		84	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoroh	307-24-4		1.06	NG_G	U			TRG				20171116		0.35	0.35	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	n 375-85-9		1.06	NG_G	U			TRG				20171116		0.47	0.47	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	o 335-67-1		1.06	NG_G	U			TRG				20171116		0.53	0.53	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	n 375-95-1		1.06	NG_G	U			TRG				20171116		0.46	0.46	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	d 335-76-2		1.06	NG_G	U			TRG				20171116		0.29	0.29	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	u 2058-94-8		1.06	NG_G	U			TRG				20171116		0.44	0.44	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	d 307-55-1		0.53	NG_G	U			TRG				20171116		0.26	0.26	5.1	70	0.53	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	t 72629-94-8		1.06	NG_G	U			TRG				20171116		0.3	0.3	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	t 376-06-7		2.13	NG_G	U			TRG				20171116		0.67	0.67	5.1	70	2.13	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	N-Methyl	F 2355-31-9		2.66	NG_G	U			TRG				20171116		1.19	1.19	5.1	70	2.66	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	N-Ethyl P	er2991-50-6		2.13	NG_G	U			TRG				20171116		0.61	0.61	5.1	70	2.13	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	b 375-73-5		1.06	NG_G	U			TRG				20171116		0.38	0.38	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	n 355-46-4		0.89	NG_G	J			TRG				20171116		0.23	0.23	5.1	70	0.53	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	Perfluoro	o 1763-23-1		1.04	NG_G	J			TRG				20171116		0.29	0.29	5.1	70	1.06	5.32	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C5-PFH	x BDO-2217		86	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C4-PFH	p BDO-2218		87	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C8-PFO	A BDO-2219		86	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C9-PFN	A BDO-2221		86	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C6-PFD	A BDO-2222		86	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C7-PFU	nDO-2223		92	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C2-PFD	oBDO-2112		95	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C2-PFT	e BDO-2224		98	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	d3-MeFOS	BDO-1838		70	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	d5-EtFOS	A BDO-1839		68	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C3-PFB	S BDO-2226		95	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C3-PFH	x BDO-2227		92	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181022	20:16:16	J8665-FS	10	1	7.16	13C8-PFO	S BDO-2228		101	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoroh	307-24-4		1.56	NG_G	U			TRG				20171116		0.52	0.52	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	n 375-85-9		1.56	NG_G	U			TRG				20171116		0.69	0.69	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	o 335-67-1		1.56	NG_G	U			TRG				20171116		0.78	0.78	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	n 375-95-1		1.56	NG_G	U			TRG				20171116		0.67	0.67	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	d 335-76-2		1.56	NG_G	U			TRG				20171116		0.42	0.42	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	u 2058-94-8		1.56	NG_G	U			TRG				20171116		0.64	0.64	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	d 307-55-1		0.78	NG_G	U			TRG				20171116		0.38	0.38	5.1	70	0.78	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	t 72629-94-8		1.56	NG_G	U			TRG				20171116		0.44	0.44	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	t 376-06-7		3.13	NG_G	U			TRG				20171116		0.98	0.98	5.1	70	3.13	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	N-Methyl	F 2355-31-9		3.91	NG_G	U			TRG				20171116		1.75	1.75	5.1	70	3.91	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	N-Ethyl P	er2991-50-6		3.13	NG_G	U			TRG				20171116		0.89	0.89	5.1	70	3.13	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	b 375-73-5		1.56	NG_G	U			TRG				20171116		0.56	0.56	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	n 355-46-4		0.78	NG_G	U			TRG				20171116		0.34	0.34	5.1	70	0.78	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	Perfluoro	o 1763-23-1		1.56	NG_G	U			TRG				20171116		0.42	0.42	5.1	70	1.56	7.81	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	13C5-PFH	x BDO-2217		73	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	13C4-PFH	p BDO-2218		80	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	13C8-PFO	A BDO-2219		85	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	13C9-PFN	A BDO-2221		67	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	13C6-PFD	A BDO-2222		77	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	13C7-PFU	nDO-2223		84	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	13C2-PFD	oBDO-2112		78	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	13C2-PFT	e BDO-2224		77	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:36:51	J8666-FS	10	1	37.44	d3-MeFOS	BDO-1838		56	PCT_REC				SURR	SLSP	150	50	20171116					5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS12-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006

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_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-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:58:33	J8672-FS	10	1	2.51		13C3-PFBS	BDO-2226		99	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:58:33	J8672-FS	10	1	2.51		13C3-PFHx	BDO-2227		94	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	02:58:33	J8672-FS	10	1	2.51		13C8-PFOS	BDO-2228		82	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluoroh	307-24-4		1.27	NG_G	U			TRG				20171116		0.42	0.42	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluoroh	375-85-9		1.27	NG_G	U			TRG				20171116		0.56	0.56	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluoroo	335-67-1		1.27	NG_G	U			TRG				20171116		0.64	0.64	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluoro	375-95-1		1.27	NG_G	U			TRG				20171116		0.55	0.55	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluorod	335-76-2		1.27	NG_G	U			TRG				20171116		0.34	0.34	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluorou	2058-94-8		1.27	NG_G	U			TRG				20171116		0.52	0.52	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluorod	307-55-1		0.64	NG_G	U			TRG				20171116		0.31	0.31	5.1	70	0.64	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluorot	72629-94-8		1.27	NG_G	U			TRG				20171116		0.36	0.36	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluorot	376-06-7		2.55	NG_G	U			TRG				20171116		0.8	0.8	5.1	70	2.55	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		N-Methyl	FZ355-31-9		3.18	NG_G	U			TRG				20171116		1.43	1.43	5.1	70	3.18	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		N-Ethyl Pe	r2991-50-6		2.55	NG_G	U			TRG				20171116		0.73	0.73	5.1	70	2.55	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluorob	375-73-5		1.27	NG_G	U			TRG				20171116		0.46	0.46	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluoroh	355-46-4		0.64	NG_G	U			TRG				20171116		0.28	0.28	5.1	70	0.64	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		Perfluoroo	1763-23-1		1.27	NG_G	U			TRG				20171116		0.34	0.34	5.1	70	1.27	6.37	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C5-PFHx	BDO-2217		88	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C4-PFHp	BDO-2218		91	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C8-PFOA	BDO-2219		91	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C9-PFNA	BDO-2221		83	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C6-PFDA	BDO-2222		85	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C7-PFUn	BDO-2223		96	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C2-PFDo	BDO-2112		89	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C2-PFTe	BDO-2224		90	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		d3-MeFOS	BDO-1838		80	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		d5-EtFOSA	BDO-1839		88	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C3-PFBS	BDO-2226		111	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C3-PFHx	BDO-2227		98	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:09:25	J8673-FS	10	1	20.04		13C8-PFOS	BDO-2228		85	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluoroh	307-24-4		1.02	NG_G	U			TRG				20171116		0.34	0.34	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluoroh	375-85-9		1.02	NG_G	U			TRG				20171116		0.45	0.45	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluoroo	335-67-1		1.02	NG_G	U			TRG				20171116		0.51	0.51	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluoro	375-95-1		1.02	NG_G	U			TRG				20171116		0.44	0.44	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluorod	335-76-2		1.02	NG_G	U			TRG				20171116		0.28	0.28	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluorou	2058-94-8		1.02	NG_G	U			TRG				20171116		0.42	0.42	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluorod	307-55-1		0.51	NG_G	U			TRG				20171116		0.24	0.24	5.1	70	0.51	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluorot	72629-94-8		1.02	NG_G	U			TRG				20171116		0.29	0.29	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluorot	376-06-7		2.04	NG_G	U			TRG				20171116		0.64	0.64	5.1	70	2.04	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		N-Methyl	FZ355-31-9		2.55	NG_G	U			TRG				20171116		1.14	1.14	5.1	70	2.55	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		N-Ethyl Pe	r2991-50-6		2.04	NG_G	U			TRG				20171116		0.58	0.58	5.1	70	2.04	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluorob	375-73-5		1.02	NG_G	U			TRG				20171116		0.37	0.37	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluoroh	355-46-4		0.51	NG_G	U			TRG				20171116		0.22	0.22	5.1	70	0.51	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		Perfluoroo	1763-23-1		1.41	NG_G	J			TRG				20171116		0.28	0.28	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C5-PFHx	BDO-2217		80	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C4-PFHp	BDO-2218		82	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C8-PFOA	BDO-2219		85	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C9-PFNA	BDO-2221		71	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C6-PFDA	BDO-2222		87	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C7-PFUn	BDO-2223		91	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C2-PFDo	BDO-2112		87	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C2-PFTe	BDO-2224		97	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		d3-MeFOS	BDO-1838		82	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		d5-EtFOSA	BDO-1839		76	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C3-PFBS	BDO-2226		107	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C3-PFHx	BDO-2227		95	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20181006	20181009			20181011	14:45:00	20181020	03:20:16	J8674-FS	10	1	1.71		13C8-PFOS	BDO-2228		88	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:31:08	J8675-FS	10	1	1.02		Perfluoroh	307-24-4		1.02	NG_G	U			TRG				20171116		0.34	0.34	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:31:08	J8675-FS	10	1	1.02		Perfluoroh	375-85-9		1.02	NG_G	U			TRG				20171116		0.45	0.45	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:31:08	J8675-FS	10	1	1.02		Perfluoroo	335-67-1		1.02	NG_G	U			TRG				20171116		0.51	0.51	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		POINT_MU	VC-CS10-SI	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20181006	20181009			20181011	14:45:00	20181020	03:31:08	J8675-FS	10	1	1.02		Perfluoro	375-95-1		1.02	NG_G	U			TRG				20171116		0.44	0.44	5.1	70	1.02	5.1	18-0610	DP-18-0306		
N6247016	4164		PO

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
NAVAL BASE VENTURA COUNTY, CALIFORNIA

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 18-0610
Laboratory: Battelle Norwell Operations, Norwell, Massachusetts
Site: Naval Base Ventura County, CTO-4164, California
Date: December 29, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	VC-CS12-SS01-000H	J8658-FS	Soil
2	VC-CS12-SB01-0102	J8659-FS	Soil
3	VC-CS12-SB01-0506	J8660-FS	Soil
4	VC-CS12-SS02-000H	J8661-FS	Soil
5	VC-CS12-SB02-0102	J8662-FS	Soil
6	VC-CS12-SB02-0506	J8663-FS	Soil
7	VC-CS12-SS03-000H	J8664-FS	Soil
8	VC-CS12-SB03-0102	J8665-FS	Soil
9	VC-CS12-SB03-0506	J8666-FS	Soil
10	VC-CS10-SS01-000H	J8671-FS	Soil
11	VC-CS10-SB01-0102	J8672-FS	Soil
12	VC-CS10-SB01-0506	J8673-FS	Soil
13	VC-CS10-SS02-000H	J8674-FS	Soil
14	VC-CS10-SB02-0102	J8675-FS	Soil
15	VC-CS10-SB02-0506	J8676-FS	Soil

A full data validation was performed on the analytical data for fifteen soil samples collected on October 6, 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 as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedances of QC criteria.

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 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 are summarized below.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
VC-SO-EB11-10062018	PFHxA	0.23	U	2, 4-6
VC-SO-FB11-10062018	PFHxS	0.33	U	1-2, 4, 6-8

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- MS/MSD samples were not analyzed.

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: 12/31/18

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.

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1

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

Client ID		VC-CS12-SS01-000H			
Battelle ID		J8658-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.99			
Matrix		SS			
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 ~~0.304~~ U	0.22	0.50	5.00 FBL
PFOS	1763-23-1	2.21 J	0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	79
13C8-PFOA	86
13C9-PFNA	68
13C6-PFDA	82
13C7-PFUnA	84
13C2-PFDoA	84
13C2-PFTeDA	81
d3-MeFOSAA	68
d5-EtFOSAA	69
13C3-PFBS	97
13C3-PFHxS	95
13C8-PFOS	91

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2

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

Client ID		VC-CS12-SB01-0102				
Battelle ID		J8659-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		5.62				
Matrix		SB				
Sample Size		1.86				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.08 ~~0.48 J~~ U		0.35	1.08	5.38
PFHpA	375-85-9	1.08 U		0.47	1.08	5.38
PFOA	335-67-1	1.65 J		0.54	1.08	5.38
PFNA	375-95-1	1.08 U		0.46	1.08	5.38
PFDA	335-76-2	1.08 U		0.29	1.08	5.38
PFUnA	2058-94-8	1.08 U		0.44	1.08	5.38
PFDoA	307-55-1	0.54 U		0.26	0.54	5.38
PFTrDA	72629-94-8	1.08 U		0.30	1.08	5.38
PFTeDA	376-06-7	2.15 U		0.68	2.15	5.38
NMeFOSAA	2355-31-9	2.69 U		1.20	2.69	5.38
NEtFOSAA	2991-50-6	2.15 U		0.61	2.15	5.38
PFBS	375-73-5	1.08 U		0.39	1.08	5.38
PFHxS	355-46-4	2.41 ~~J~~ U		0.24	0.54	5.38
PFOS	1763-23-1	1.45 J		0.29	1.08	5.38

EBL

FBL

Surrogate Recoveries (%)

13C5-PFHxA	79
13C4-PFHpA	87
13C8-PFOA	87
13C9-PFNA	73
13C6-PFDA	89
13C7-PFUnA	94
13C2-PFDoA	82
13C2-PFTeDA	90
d3-MeFOSAA	52
d5-EtFOSAA	51
13C3-PFBS	93
13C3-PFHxS	80
13C8-PFOS	83

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3

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

Client ID		VC-CS12-SB01-0506			
Battelle ID		J8660-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		25.42			
Matrix		SB			
Sample Size		1.66			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.20 U	0.40	1.20	6.02
PFHpA	375-85-9	1.20 U	0.53	1.20	6.02
PFOA	335-67-1	1.20 U	0.60	1.20	6.02
PFNA	375-95-1	1.20 U	0.52	1.20	6.02
PFDA	335-76-2	1.20 U	0.33	1.20	6.02
PFUnA	2058-94-8	1.20 U	0.49	1.20	6.02
PFDoA	307-55-1	0.60 U	0.29	0.60	6.02
PFTrDA	72629-94-8	1.20 U	0.34	1.20	6.02
PFTeDA	376-06-7	2.41 U	0.76	2.41	6.02
NMeFOSAA	2355-31-9	3.01 U	1.35	3.01	6.02
NEtFOSAA	2991-50-6	2.41 U	0.69	2.41	6.02
PFBS	375-73-5	1.20 U	0.43	1.20	6.02
PFHxS	355-46-4	0.60 U	0.27	0.60	6.02
PFOS	1763-23-1	1.20 U	0.33	1.20	6.02

Surrogate Recoveries (%)

13C5-PFHxA	76
13C4-PFHpA	82
13C8-PFOA	82
13C9-PFNA	67
13C6-PFDA	74
13C7-PFUnA	72
13C2-PFDoA	74
13C2-PFTeDA	76
d3-MeFOSAA	54
d5-EtFOSAA	55
13C3-PFBS	81
13C3-PFHxS	74
13C8-PFOS	75

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4

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

Client ID		VC-CS12-SS02-000H				
Battelle ID		J8661-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		1.56				
Matrix		SS				
Sample Size		1.98				
Size Unit-Basis		g				
Units		ng/g_Dry	MDL	LOD	LOQ	
PFHxA	307-24-4	1.61 J U	0.33	1.01	5.05	FBL
PFHpA	**375-85-9**	**0.46 J**	**0.44**	**1.01**	**5.05**	
PFOA	335-67-1	1.01 U	0.51	1.01	5.05	
PFNA	**375-95-1**	**1.01 U**	**0.43**	**1.01**	**5.05**	
PFDA	335-76-2	1.01 U	0.27	1.01	5.05	
PFUnA	**2058-94-8**	**1.01 U**	**0.41**	**1.01**	**5.05**	
PFDoA	307-55-1	0.51 U	0.24	0.51	5.05	
PFTrDA	**72629-94-8**	**1.01 U**	**0.28**	**1.01**	**5.05**	
PFTeDA	376-06-7	2.02 U	0.64	2.02	5.05	
NMeFOSAA	**2355-31-9**	**2.53 U**	**1.13**	**2.53**	**5.05**	
NEtFOSAA	2991-50-6	2.02 U	0.58	2.02	5.05	
PFBS	**375-73-5**	**0.45 J**	**0.36**	**1.01**	**5.05**	
PFHxS	355-46-4	2.07 J U	0.22	0.51	5.05	FBL
PFOS	**1763-23-1**	**1.98 J**	**0.27**	**1.01**	**5.05**	

Surrogate Recoveries (%)

13C5-PFHxA	85
13C4-PFHpA	**86**
13C8-PFOA	94
13C9-PFNA	**75**
13C6-PFDA	90
13C7-PFUnA	**91**
13C2-PFDoA	90
13C2-PFTeDA	**92**
d3-MeFOSAA	59
d5-EtFOSAA	**62**
13C3-PFBS	97
13C3-PFHxS	**86**
13C8-PFOS	81

MW 12/29/18

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5

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

Client ID		VC-CS12-SB02-0102			
Battelle ID		J8662-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		7.95			
Matrix		SB			
Sample Size		1.87			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.07 ~~0.95 J~~ U	0.35	1.07	5.35
PFHpA	375-85-9	0.91 J	0.47	1.07	5.35
PFOA	335-67-1	3.78 J	0.53	1.07	5.35
PFNA	375-95-1	1.07 U	0.46	1.07	5.35
PFDA	335-76-2	1.07 U	0.29	1.07	5.35
PFUnA	2058-94-8	1.07 U	0.44	1.07	5.35
PFDoA	307-55-1	0.53 U	0.26	0.53	5.35
PFTrDA	72629-94-8	1.07 U	0.30	1.07	5.35
PFTeDA	376-06-7	2.14 U	0.67	2.14	5.35
NMeFOSAA	2355-31-9	2.67 U	1.20	2.67	5.35
NEtFOSAA	2991-50-6	2.14 U	0.61	2.14	5.35
PFBS	375-73-5	1.07 U	0.39	1.07	5.35
PFHxS	355-46-4	7.01	0.24	0.53	5.35
PFOS	1763-23-1	1.78 J	0.29	1.07	5.35

EBL

Surrogate Recoveries (%)

13C5-PFHxA	78
13C4-PFHpA	81
13C8-PFOA	87
13C9-PFNA	74
13C6-PFDA	82
13C7-PFUnA	87
13C2-PFDoA	84
13C2-PFTeDA	85
d3-MeFOSAA	69
d5-EtFOSAA	70
13C3-PFBS	107
13C3-PFHxS	92
13C8-PFOS	95

MW 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-CS12-SB02-0506				
Battelle ID		J8663-FS				
Sample Type		SA				
Collection Date		10/06/2018				
Extraction Date		10/11/2018				
Analysis Date		10/20/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		33.66				
Matrix		SB				
Sample Size		1.36				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.47 ~~0.56 J~~ U		0.49	1.47	7.35
PFHpA	375-85-9	1.47 U		0.65	1.47	7.35
PFOA	335-67-1	1.31 J		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	0.86 ~~J~~ U		0.32	0.74	7.35
PFOS	1763-23-1	1.47 U		0.40	1.47	7.35

EBL

FBL

Surrogate Recoveries (%)

13C5-PFHxA	79
13C4-PFHpA	85
13C8-PFOA	87
13C9-PFNA	72
13C6-PFDA	89
13C7-PFUnA	96
13C2-PFDoA	84
13C2-PFTeDA	97
d3-MeFOSAA	58
d5-EtFOSAA	59
13C3-PFBS	84
13C3-PFHxS	82
13C8-PFOS	73

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7

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

Client ID		VC-CS12-SS03-000H			
Battelle ID		J8664-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		2.18			
Matrix		SS			
Sample Size		1.92			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.04 U	0.34	1.04	5.21
PFHpA	375-85-9	1.04 U	0.46	1.04	5.21
PFOA	335-67-1	1.04 U	0.52	1.04	5.21
PFNA	375-95-1	1.04 U	0.45	1.04	5.21
PFDA	335-76-2	1.04 U	0.28	1.04	5.21
PFUnA	2058-94-8	1.04 U	0.43	1.04	5.21
PFDoA	307-55-1	0.52 U	0.25	0.52	5.21
PFTrDA	72629-94-8	1.04 U	0.29	1.04	5.21
PFTeDA	376-06-7	2.08 U	0.66	2.08	5.21
NMeFOSAA	2355-31-9	2.60 U	1.17	2.60	5.21
NEtFOSAA	2991-50-6	2.08 U	0.59	2.08	5.21
PFBS	375-73-5	1.04 U	0.38	1.04	5.21
PFHxS	355-46-4	0.52 ~~0.28 J~~ U	0.23	0.52	5.21
PFOS	1763-23-1	3.08 J	0.28	1.04	5.21

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Surrogate Recoveries (%)	
13C5-PFHxA	88
13C4-PFHpA	92
13C8-PFOA	92
13C9-PFNA	77
13C6-PFDA	85
13C7-PFUnA	90
13C2-PFDoA	85
13C2-PFTeDA	89
d3-MeFOSAA	66
d5-EtFOSAA	63
13C3-PFBS	86
13C3-PFHxS	87
13C8-PFOS	84

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8

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

Client ID		VC-CS12-SB03-0102			
Battelle ID		J8665-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/22/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		7.16			
Matrix		SB			
Sample Size		1.88			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.06 U	0.35	1.06	5.32
PFHpA	375-85-9	1.06 U	0.47	1.06	5.32
PFOA	335-67-1	1.06 U	0.53	1.06	5.32
PFNA	375-95-1	1.06 U	0.46	1.06	5.32
PFDA	335-76-2	1.06 U	0.29	1.06	5.32
PFUnA	2058-94-8	1.06 U	0.44	1.06	5.32
PFDoA	307-55-1	0.53 U	0.26	0.53	5.32
PFTrDA	72629-94-8	1.06 U	0.30	1.06	5.32
PFTeDA	376-06-7	2.13 U	0.67	2.13	5.32
NMeFOSAA	2355-31-9	2.66 U	1.19	2.66	5.32
NEtFOSAA	2991-50-6	2.13 U	0.61	2.13	5.32
PFBS	375-73-5	1.06 U	0.38	1.06	5.32
PFHxS	355-46-4	0.89 J U	0.23	0.53	5.32
PFOS	1763-23-1	1.04 J	0.29	1.06	5.32

FBL

Surrogate Recoveries (%)	
13C5-PFHxA	86
13C4-PFHpA	87
13C8-PFOA	86
13C9-PFNA	86
13C6-PFDA	86
13C7-PFUnA	92
13C2-PFDoA	95
13C2-PFTeDA	98
d3-MeFOSAA	70
d5-EtFOSAA	68
13C3-PFBS	95
13C3-PFHxS	92
13C8-PFOS	101

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

Client ID		VC-CS12-SB03-0506			
Battelle ID		J8666-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		37.44			
Matrix		SB			
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	1.56 U	0.42	1.56	7.81

Surrogate Recoveries (%)

13C5-PFHxA	73
13C4-PFHpA	80
13C8-PFOA	85
13C9-PFNA	67
13C6-PFDA	77
13C7-PFUnA	84
13C2-PFDoA	78
13C2-PFTeDA	77
d3-MeFOSAA	56
d5-EtFOSAA	56
13C3-PFBS	88
13C3-PFHxS	83
13C8-PFOS	80

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

Client ID		VC-CS10-SS01-000H			
Battelle ID		J8671-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.26			
Matrix		SS			
Sample Size		1.94			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.03 U	0.34	1.03	5.15
PFHpA	375-85-9	1.03 U	0.45	1.03	5.15
PFOA	335-67-1	1.03 U	0.52	1.03	5.15
PFNA	375-95-1	1.03 U	0.44	1.03	5.15
PFDA	335-76-2	1.03 U	0.28	1.03	5.15
PFUnA	2058-94-8	1.03 U	0.42	1.03	5.15
PFDoA	307-55-1	0.52 U	0.25	0.52	5.15
PFTrDA	72629-94-8	1.03 U	0.29	1.03	5.15
PFTeDA	376-06-7	2.06 U	0.65	2.06	5.15
NMeFOSAA	2355-31-9	2.58 U	1.15	2.58	5.15
NEtFOSAA	2991-50-6	2.06 U	0.59	2.06	5.15
PFBS	375-73-5	1.03 U	0.37	1.03	5.15
PFHxS	355-46-4	0.52 U	0.23	0.52	5.15
PFOS	1763-23-1	1.09 J	0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	85
13C8-PFOA	87
13C9-PFNA	78
13C6-PFDA	88
13C7-PFUnA	94
13C2-PFDoA	86
13C2-PFTeDA	84
d3-MeFOSAA	59
d5-EtFOSAA	60
13C3-PFBS	84
13C3-PFHxS	81
13C8-PFOS	76

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

Client ID	VC-CS10-SB01-0102			
Battelle ID	J8672-FS			
Sample Type	SA			
Collection Date	10/06/2018			
Extraction Date	10/11/2018			
Analysis Date	10/20/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	2.51			
Matrix	SB			
Sample Size	1.94			
Size Unit-Basis	g			
Units	ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.03 U	0.34	1.03	5.15
PFHpA	375-85-9	1.03 U	0.45	1.03	5.15
PFOA	335-67-1	1.03 U	0.52	1.03	5.15
PFNA	375-95-1	1.03 U	0.44	1.03	5.15
PFDA	335-76-2	1.03 U	0.28	1.03	5.15
PFUnA	2058-94-8	1.03 U	0.42	1.03	5.15
PFDoA	307-55-1	0.52 U	0.25	0.52	5.15
PFTrDA	72629-94-8	1.03 U	0.29	1.03	5.15
PFTeDA	376-06-7	2.06 U	0.65	2.06	5.15
NMeFOSAA	2355-31-9	2.58 U	1.15	2.58	5.15
NEtFOSAA	2991-50-6	2.06 U	0.59	2.06	5.15
PFBS	375-73-5	1.03 U	0.37	1.03	5.15
PFHxS	355-46-4	0.52 U	0.23	0.52	5.15
PFOS	1763-23-1	1.03 U	0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	87
13C4-PFHpA	87
13C8-PFOA	90
13C9-PFNA	81
13C6-PFDA	87
13C7-PFUnA	87
13C2-PFDoA	86
13C2-PFTeDA	88
d3-MeFOSAA	67
d5-EtFOSAA	71
13C3-PFBS	99
13C3-PFHxS	94
13C8-PFOS	82

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

Client ID		VC-CS10-SB01-0506			
Battelle ID		J8673-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.04			
Matrix		SB			
Sample Size		1.57			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.27 U	0.42	1.27	6.37
PFHpA	375-85-9	1.27 U	0.56	1.27	6.37
PFOA	335-67-1	1.27 U	0.64	1.27	6.37
PFNA	375-95-1	1.27 U	0.55	1.27	6.37
PFDA	335-76-2	1.27 U	0.34	1.27	6.37
PFUnA	2058-94-8	1.27 U	0.52	1.27	6.37
PFDoA	307-55-1	0.64 U	0.31	0.64	6.37
PFTrDA	72629-94-8	1.27 U	0.36	1.27	6.37
PFTeDA	376-06-7	2.55 U	0.80	2.55	6.37
NMeFOSAA	2355-31-9	3.18 U	1.43	3.18	6.37
NEtFOSAA	2991-50-6	2.55 U	0.73	2.55	6.37
PFBS	375-73-5	1.27 U	0.46	1.27	6.37
PFHxS	355-46-4	0.64 U	0.28	0.64	6.37
PFOS	1763-23-1	1.27 U	0.34	1.27	6.37

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	91
13C8-PFOA	91
13C9-PFNA	83
13C6-PFDA	85
13C7-PFUnA	96
13C2-PFDoA	89
13C2-PFTeDA	90
d3-MeFOSAA	80
d5-EtFOSAA	88
13C3-PFBS	111
13C3-PFHxS	98
13C8-PFOS	85

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

Client ID		VC-CS10-SS02-000H			
Battelle ID		J8674-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.71			
Matrix		SS			
Sample Size		1.96			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.10
PFHpA	375-85-9	1.02 U	0.45	1.02	5.10
PFOA	335-67-1	1.02 U	0.51	1.02	5.10
PFNA	375-95-1	1.02 U	0.44	1.02	5.10
PFDA	335-76-2	1.02 U	0.28	1.02	5.10
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.10
PFDoA	307-55-1	0.51 U	0.24	0.51	5.10
PFTrDA	72629-94-8	1.02 U	0.29	1.02	5.10
PFTeDA	376-06-7	2.04 U	0.64	2.04	5.10
NMeFOSAA	2355-31-9	2.55 U	1.14	2.55	5.10
NEtFOSAA	2991-50-6	2.04 U	0.58	2.04	5.10
PFBS	375-73-5	1.02 U	0.37	1.02	5.10
PFHxS	355-46-4	0.51 U	0.22	0.51	5.10
PFOS	1763-23-1	1.41 J	0.28	1.02	5.10
Surrogate Recoveries (%)					
13C5-PFHxA		80			
13C4-PFHpA		82			
13C8-PFOA		85			
13C9-PFNA		71			
13C6-PFDA		87			
13C7-PFUnA		91			
13C2-PFDoA		87			
13C2-PFTeDA		97			
d3-MeFOSAA		82			
d5-EtFOSAA		76			
13C3-PFBS		107			
13C3-PFHxS		95			
13C8-PFOS		88			

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

Client ID		VC-CS10-SB02-0102			
Battelle ID		J8675-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.02			
Matrix		SB			
Sample Size		1.96			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.10
PFHpA	375-85-9	1.02 U	0.45	1.02	5.10
PFOA	335-67-1	1.02 U	0.51	1.02	5.10
PFNA	375-95-1	1.02 U	0.44	1.02	5.10
PFDA	335-76-2	1.02 U	0.28	1.02	5.10
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.10
PFDoA	307-55-1	0.51 U	0.24	0.51	5.10
PFTrDA	72629-94-8	1.02 U	0.29	1.02	5.10
PFTeDA	376-06-7	2.04 U	0.64	2.04	5.10
NMeFOSAA	2355-31-9	2.55 U	1.14	2.55	5.10
NEtFOSAA	2991-50-6	2.04 U	0.58	2.04	5.10
PFBS	375-73-5	1.02 U	0.37	1.02	5.10
PFHxS	355-46-4	0.51 U	0.22	0.51	5.10
PFOS	1763-23-1	1.02 U	0.28	1.02	5.10
Surrogate Recoveries (%)					
13C5-PFHxA		88			
13C4-PFHpA		88			
13C8-PFOA		90			
13C9-PFNA		74			
13C6-PFDA		88			
13C7-PFUnA		97			
13C2-PFDoA		89			
13C2-PFTeDA		97			
d3-MeFOSAA		66			
d5-EtFOSAA		62			
13C3-PFBS		85			
13C3-PFHxS		83			
13C8-PFOS		83			

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

Client ID		VC-CS10-SB02-0506			
Battelle ID		J8676-FS			
Sample Type		SA			
Collection Date		10/06/2018			
Extraction Date		10/11/2018			
Analysis Date		10/20/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.37			
Matrix		SB			
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	1.29 U	0.35	1.29	6.45

Surrogate Recoveries (%)

13C5-PFHxA	88
13C4-PFHpA	84
13C8-PFOA	92
13C9-PFNA	77
13C6-PFDA	90
13C7-PFUnA	93
13C2-PFDoA	86
13C2-PFTeDA	91
d3-MeFOSAA	60
d5-EtFOSAA	65
13C3-PFBS	79
13C3-PFHxS	90
13C8-PFOS	80

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-CS10-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6222669	1868586.7	Perfluoroalkyl Compounds	VC-CS10-SB01-0102	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS10-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6222669	1868586.7	Perfluoroalkyl Compounds	VC-CS10-SB01-0506	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS10-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6222669	1868586.7	Perfluoroalkyl Compounds	VC-CS10-SS01-000H	SU	Surface soil (less than 6 inches)	06-Oct-18
VC-CS10-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6222993.2	1868317.8	Perfluoroalkyl Compounds	VC-CS10-SB02-0102	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS10-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6222993.2	1868317.8	Perfluoroalkyl Compounds	VC-CS10-SB02-0506	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS10-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6222993.2	1868317.8	Perfluoroalkyl Compounds	VC-CS10-SS02-000H	SU	Surface soil (less than 6 inches)	06-Oct-18
VC-CS12-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221575.1	1866808.9	Perfluoroalkyl Compounds	VC-CS12-SB01-0102	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS12-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221575.1	1866808.9	Perfluoroalkyl Compounds	VC-CS12-SB01-0506	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS12-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221575.1	1866808.9	Perfluoroalkyl Compounds	VC-CS12-SS01-000H	SU	Surface soil (less than 6 inches)	06-Oct-18
VC-CS12-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221384.4	1866572.1	Perfluoroalkyl Compounds	VC-CS12-SB02-0102	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS12-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221384.4	1866572.1	Perfluoroalkyl Compounds	VC-CS12-SB02-0506	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS12-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221384.4	1866572.1	Perfluoroalkyl Compounds	VC-CS12-SS02-000H	SU	Surface soil (less than 6 inches)	06-Oct-18
VC-CS12-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221465.8	1866710	Perfluoroalkyl Compounds	VC-CS12-SB03-0102	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS12-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221465.8	1866710	Perfluoroalkyl Compounds	VC-CS12-SB03-0506	SBS	Sub-surface soil (> 6)	06-Oct-18
VC-CS12-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0610	6221465.8	1866710	Perfluoroalkyl Compounds	VC-CS12-SS03-000H	SU	Surface soil (less than 6 inches)	06-Oct-18