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 18-0585

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 18-0585

Package DP-18-0297

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 18-0585

Package DP-18-0297

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: Robert Lizotte, Jr. 2018.10.18 14:45:38 -04'00'

QC Chemist Approval: Digitally signed by devinec@battelle.org DN: cn=devinec@battelle.org Date: 2018.10.22 16:25:50 -04'00'

Project Manager Approval: Digitally signed by Jonathan Thorn Date: 2018.10.23 07:39:42 -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 18-0585

Package DP-18-0297

1	***Miscellaneous Documentation*** Case Narrative, Laboratory Accreditations.	1
2	***Chain of Custody Records*** Sample Receipt Records	11
3	***Tables*** Analytical Data Tables, Qualifier Definitions.	33

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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
Candice Penn McCoy		CPM	4/4/2018
Rich Rostucci		RR	4/4/2018
Michael Mears			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		LMG	4.4.18

BATTELLE

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: 18-0585
Project/Site: Naval Base Ventura County
CTO: 4164

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CR894PB-FS	180507-02: Ottawa Sand	SEDIMENT	10/2/2018	10/2/2018
CR895LCS-FS	180507-02: Ottawa Sand	SEDIMENT	10/2/2018	10/2/2018
J8381-FS	VC-PM64B-SB03-0506	SB	9/24/2018	9/27/2018
J8386-FS	VC-HS09-SB01-0102	SB	9/25/2018	9/27/2018
J8387-FS	VC-HS09-SB01-0506	SB	9/25/2018	9/27/2018
J8388-FS	VC-HS09-SB02-0102	SB	9/25/2018	9/27/2018
J8389-FS	VC-HS09-SB02-0506	SB	9/25/2018	9/27/2018
J8390-FS	VC-HS09-SS03-000H	SS	9/25/2018	9/27/2018
J8391-FS	VC-HS09-SB03-0102	SB	9/25/2018	9/27/2018
J8392-FS	VC-HS09-SB03-0506	SB	9/25/2018	9/27/2018
J8393MS-FS	VC-HS09-SB03-0506-MS	SB	9/25/2018	9/27/2018
J8394MSD-FS	VC-HS09-SB03-0506-MSD	SB	9/25/2018	9/27/2018
J8401-FS	VC-HS09-SS01-000H	SS	9/25/2018	9/27/2018
J8402-FS	VC-HS09-SS02-000H	SS	9/25/2018	9/27/2018
J8403-FS	VC-AOC16-SS01-000H	SS	9/25/2018	9/27/2018
J8404-FS	VC-AOC16-SB01-0102	SB	9/25/2018	9/27/2018
J8405-FS	VC-AOC16-SB01-0506	SB	9/25/2018	9/27/2018
J8406-FS	VC-AOC16-SS02-000H	SS	9/25/2018	9/27/2018
J8407-FS	VC-AOC16-SB02-0102	SB	9/25/2018	9/27/2018
J8408-FS	VC-AOC16-SB02-0506	SB	9/25/2018	9/27/2018
J8409-FS	VC-AOC16-SS03-000H	SS	9/25/2018	9/27/2018
J8410-FS	VC-AOC16-SB03-0102	SB	9/25/2018	9/27/2018
J8411-FS	VC-AOC16-SB03-0506	SB	9/25/2018	9/27/2018

Miscellaneous Documentation

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QA/QC Summary
Batch 18-0585

Project:	CTO-4164 Naval Base Ventura County, California
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SS, SB
Data Set:	DP-18-0297
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
9/24-25/2018	9/27/2018	0.2 and 0.9
Corrective Actions	Minor discrepancies between the COC and the sample containers were corrected by the Project Chemist, email clarifying IDs is included with the sample custody records.	
Sample Storage	The samples were stored refrigerated until extraction.	
Related samples	NA	

	METHOD SUMMARIES
Sample Preparation	Solid samples were aliquoted into extraction tubes and spiked with surrogates prior to the addition of solvent. The sediment was serially extracted on the Geno/Grinder with 0.4% NH_3 in methanol. 1 mL of extract was refined using ENVI-carb SPE cartridges. Extracts were concentrated to dryness under nitrogen with a water bath set between 35 °C and 45 °C, reconstituted with 80:20 methanol/water (V/V) and fortified with internal standard. Extracts were transferred for LC-MS/MS analysis.
Prep comments	All samples were pre-screened prior to extraction to check potential levels of PFAS in the samples.
Analysis	PFAS were measured by liquid chromatography tandem mass spectrometry (LC-MS/MS) in the multiple reaction monitoring (MRM). An initial calibration consisting of representative target analytes, labelled analogs, and internal standards was analyzed prior to analysis to demonstrate the linear range of analysis. Calibration verification was performed at the beginning and end of 10 injections and at the end of each sequence. Target PFAS were quantified using the isotope dilution method. Samples are reported in ng/g concentrations.
Analysis Comments	Samples analyzed on Sciex 5500 LC-MS/MS. In cases were native PFAS compounds were reported from dilutions (above calibration in non-diluted extracts), the extracted internal standard (surrogate) used to quantify the native compound was also reported from the dilution. Where detected in samples, PFOS is a mixture of linear and branched isomers

Holding Times	Extraction Date(s)	Analysis Date(s)
	10/2/2018	10/14/2018

QA/QC Summary
Batch 18-0585

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

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

Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A MS/MSD was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery and <30% RPD	No exceedances noted.
	No comments.

Extracted Internal Standard Analytes	Labelled analog compounds were added prior to extraction. The recoveries are calculated to measure extraction efficiency.
50-150% of true value	No exceedances noted.
	No comments.

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

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

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

QA/QC Summary
Batch 18-0585

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: 18-0585
Data Set: DP-18-0297
Test Code: Master_369

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

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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-4164 Naval Base Ventura County,	**Data Set Number:**	DP-18-0297
Project Number:	100110125-01	**Prep Batch Number:**	18-0585
Entered By:	Robert Lizotte Jr	**Entered On:**	10/17/2018
Test Code (Matrix Type):	Master_369(S)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE). The data were integrated by D.Schumitz and the package was prepared by R.Lizotte
-BL 10/17/0218

The following samples had the labelled surrogates reported from the dilution rather than the orginal extract:
VC-AOC16-SS01-000H (J8403)
VC-AOC16-SS02-000H (J8406)
VC-AOC16-SB02-0102 (J8407)
VC-AOC16-SS03-000H (J8409)
VC-AOC16-SB03-0102 (J8410)
-BL 10/17/0218

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.10.18 15:44:07 -04'00'

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Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batch: 18-0585
Data Set: DP-18-0297

		CR894PB-FS (180507-02: Ottawa Sand)	CR895LCS-FS (180507-02: Ottawa Sand)	J8393MS-FS (VC-HS09-SB03-0506-MS)	J8394MSD-FS (VC-HS09-SB03-0506-MSD)	J8381-FS (VC-PM64B-SB03-0506)	J8386-FS (VC-HS09-SB01-0102)	J8387-FS (VC-HS09-SB01-0506)	J8388-FS (VC-HS09-SB02-0102)
PFHxA	307-24-4	-	L	L	L	-	-	-	-
PFHpA	375-85-9	-	L	L	L	-	L	-	-
PFOA	335-67-1	-	L	L	L	-	L	L	L
PFNA	375-95-1	-	L	L	L	-	-	-	-
PFDA	335-76-2	-	L	L	L	-	-	-	-
PFUnA	2058-94-8	-	L	L	L	-	-	-	-
PFDoA	307-55-1	-	L	L	L	-	-	-	-
PFTrDA	72629-94-8	-	L	L	L	-	-	-	-
PFTeDA	376-06-7	-	L	L	L	-	-	-	-
NMeFOSAA	2355-31-9	-	L	L	L	-	-	-	-
NEtFOSAA	2991-50-6	-	L	L	L	-	-	-	-
PFBS	375-73-5	-	L	L	L	-	-	-	-
PFHxS	355-46-4	-	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br	-
PFOS	1763-23-1	-	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br	-

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

BATTELLE
It can

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

	J8389-FS (VC-HS09-SB02-0506)	J8390-FS (VC-HS09-SS03-000H)	J8391-FS (VC-HS09-SB03-0102)	J8392-FS (VC-HS09-SB03-0506)	J8401-FS (VC-HS09-SS01-000H)	J8402-FS (VC-HS09-SS02-000H)	J8403-FS (VC-AOC16-SS01-000H)	J8404-FS (VC-AOC16-SB01-0102)
PFHxA	-	-	-	-	L	-	L	L
PFHpA	-	-	-	-	L	-	L	L
PFOA	L	L	-	-	L	L	L	L
PFNA	-	-	-	-	-	-	L	L
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	L	-	-	L
PFHxS	-	-	-	-	L/Br	-	L/Br	L/Br
PFOS	-	L/Br	L/Br	-	L/Br	L/Br	L/Br	L/Br

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

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

	J8405-FS (VC-AOC16-SB01-0506)	J8406-FS (VC-AOC16-SS02-000H)	J8407-FS (VC-AOC16-SB02-0102)	J8408-FS (VC-AOC16-SB02-0506)	J8409-FS (VC-AOC16-SS03-000H)	J8410-FS (VC-AOC16-SB03-0102)	J8411-FS (VC-AOC16-SB03-0506)
PFHxA	L	L	L	L	L	L	L
PFHpA	L	L	L	L	L	L	L
PFOA	L	L	L	L	L	L	L
PFNA	L	L	L	-	L	-	-
PFDA	-	-	-	-	L	-	-
PFUnA	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-
PFBS	-	L	L	L	L	-	L
PFHxS	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br
PFOS	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br

"L" :Linear
"Br": branched
"L/Br": Linear/Bra
"-": 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

Sample Receipt Form

Approved: ☑ **Authorized** ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Thursday, September 27, 2018 10:30 AM

No. of Shipping Containers: 2

SHIPMENT

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

COC Forms: ☑ **Shipped with samples** ☐ **No Forms**

Cooler(s)/Box(es)

Cntr	Type	Tracking No.	Seal	Seal	Container	Therm.	Temp C	Smps
1 of 2	Cooler	782963465419	Custody Seals	Intact	Intact	Therm_1	0.2	17
2 of 2	Cooler	782963465420	Custody Seals	Intact	Intact	Therm_1	0.9	43

Samples

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

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

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

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

Samples Acidified: ☐ Yes ☐ No ☑ Unknown

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

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

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

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

Storage Location: Custody: Refrigerator - R0119 (NA) **BDO IDs Assigned:** J8352 - J8411

Samples logged in by: Schumitz, Matt **Date/Time:** 09/27/2018 10:30 AM

Approved By: Fitch, Ellyn **Approved On:** 10/8/2018 8:44:00 AM

Authorized By: **Authorized On:**

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ShpNo: SHP-180927-02

Battelle Project No: 0110125-01

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ **Approved:** ☐

COC Client: CH2M

COC Project: NBVC Basewide SI

COC Date: 9/27/2018 8:37:0

BATTELLE
It can be done

ShpNo: SHP-180927-02

Battelle Project No: 0110125-01

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ Approved: ☐

	Description of Problem:	Explanation:
Client Id	Jars and C-O-C do not have matching Ids	VC-SO-FB05-092418 has 1 bottle that matches the COC and the 1 bottle labelled as VC-AQ-FB05-092418
	Jars and C-O-C do not have matching Ids	VC-SO-EB05-092418 has 1 bottle that matches that ID and the 1 bottle labelled as VC-AQ-EB05-092418
	Jars and C-O-C do not have matching Ids	VC-AQ-FB-092518 and VC-AQ-EB-092518 contain "06" after the FB and EB on the sample labels.
	Jars and C-O-C do not have matching Ids	The last COC has 6 samples that don't match from COC to sample labels. COC Label VC-AOC16-SB01-0918 VC-AOC16-SB01-0102 VC-AOC16-SB01-0918 VC-AOC16-SB01-0506 VC-AOC16-SB02-0918 VC-AOC16-SB02-0102 VC-AOC16-SB02-0918 VC-AOC16-SB02-0506 VC-AOC16-SB03-0918 VC-AOC16-SB03-0102 VC-AOC16-SB03-0918 VC-AOC16-SB03-0506
	Jars and C-O-C do not have matching Ids	Sample VC-PM324-SB03-0102-MSD does not have 0102 listed on the sample label.
	Jars and C-O-C do not have matching Ids	The EB and FB samples do not match COC to Bottle: COC VC-SO-FB05-092418 (J8368) VC-SO-EB05-092418 (J8369) VC-AQ-FB-092518 (J8398) VC-AQ-EB-092518 (J8399) Labels 1 bottle: VC-SO-FB05-092418, 1 bottle: VC-AQ-FB05-092418 (J8368) 1 bottle: VC-SO-EB05-092418, 1 bottle: VC-AQ-EB05-092418 (J8369) VC-SO-FB06-092518 (J8398) VC-SO-EB06-092518 (J8399)

Documentation of project manager notification

Sample Custodian	Schumitz, Matt	**Date:**	9/27/2018 2:24:00 PM
Laboratory Manager:	Thorn, Jonathan	**Date:**	10/5/2018 11:01:00 A
Project Manager:	Thorn, Jonathan	**Date:**	10/5/2018 11:01:00 A

BATTELLE
It can be done

ShpNo: SHP-180927-02

Battelle Project No: 0110125-01

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ Approved: ☐

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

On 27-Sep-18 **I contacted** Hill, Tiffany **at** CH2M

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

Received clarification on all sample IDs from client. Email is included in the COC records.

Date this form was received back to the custodian: _____

Reference Number: _____

Fitch, Ellyn M

From: Schumitz, Matthew
Sent: Friday, October 05, 2018 7:31 AM
To: Thorn, Jonathan R
Cc: Fitch, Ellyn M
Subject: FW: SHP-180927-02 corrections

FYI

From: Hill, Tiffany/CVO <Tiffany.Hill@jacobs.com>
Sent: Thursday, October 04, 2018 4:54 PM
To: Schumitz, Matthew <SCHUMITZM@battelle.org>
Subject: RE: SHP-180927-02 corrections

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

Hi Matthew,

The way you have it logged in now is correct. Sorry about my typo on the date collected.

Thanks,

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

---

From: Schumitz, Matthew [mailto:SCHUMITZM@battelle.org]
Sent: Thursday, October 04, 2018 1:40 PM
To: Hill, Tiffany/CVO <Tiffany.Hill@jacobs.com>
Subject: [EXTERNAL] SHP-180927-02 corrections

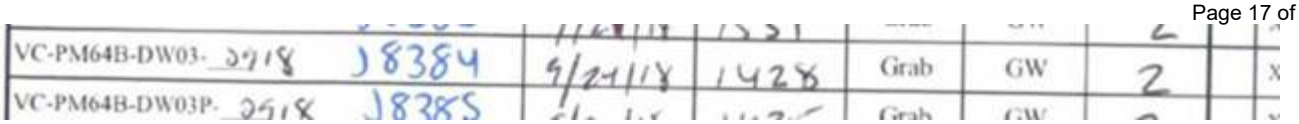
Hi Tiffany,

There has been some confusion with one of the corrections that you sent for us to make from the shipment we received on 9/27. See below I have snippets of your memo, the COC and our log in page.
The sample ID appears to correct across the board, but we do notice that the collection date is listed as 9/25/18 on your memo, should we change that to reflect that date?

If it would be easier we can have a quick chat or however you think is best to handle this.

Thanks

J8384	VC-PM64B-DW02-0918	VC-PM64B-DW03-0918	9/25/18	14:28	SHP-180927-02



VC-PM64B-DW03-0918	J8384	9/24/18	1428	Grab	GW	2		X
VC-PM64B-DW03P-0918	J8385			Grab	GW			

J8384	VC-PM64B-DW03-0918	09/24/18 14:28

Matthew Schumitz

Technician - Sample Custodian
Analytical Chemistry Services
Office: 781.681.5588
schumitzm@battelle.org

Battelle
141 Longwater Dr.
Suite 202
Norwell, MA 02061
http://www.battelle.org

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MEMORANDUM CH2MHILL

Corrections to COCs

TO: Jonathan Thorn, Battelle

COPIES: File
Laboratory Package SDG: SHP 180927-02

FROM: Tiffany Hill
Project Chemist

DATE: October 1, 2018

This memo is to document corrections made to entries on the Chains of Custody (COC) and Logins for NB Ventura County, CTO-4164.

The corrections include changes to the sample IDs on the COC and Login:

Battelle ID	Sample ID on Login	Correct Sample ID	Date Collected	Time Collected	SDG
J8384	VC-PM64B-DW02-0918	VC-PM64B-DW03-0918	9/25/18	14:28	SHP-180927-02
J8404	VC-AOC16-SB01-0918	VC-AOC16-SB01-0102	9/25/18	9:43	SHP-180927-02
J8405	VC-AOC16-SB01-0918	VC-AOC16-SB01-0506	9/25/18	9:57	SHP-180927-02
J8407	VC-AOC16-SB02-0918	VC-AOC16-SB02-0102	9/25/18	10:06	SHP-180927-02
J8408	VC-AOC16-SB02-0918	VC-AOC16-SB02-0506	9/25/18	10:10	SHP-180927-02
J8410	VC-AOC16-SB03-0918	VC-AOC16-SB03-0102	9/25/18	9:44	SHP-180927-02
J8411	VC-AOC16-SB03-0918	VC-AOC16-SB03-0506	9/25/18	9:53	SHP-180927-02

BATTELLE
It can be done

ShpNo SHP-180927-02

Battelle Project No: 0110125-01

Sample Receipt Form Details

Approved: ☑ **Authorized** ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Thursday, September 27, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8352	VC-PM323-SS01-000H	09/24/18 9:52	09/27/18 8:42	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8353	VC-PM323-SB01-0102	09/24/18 9:53	09/27/18 8:42	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8354	VC-PM323-SB01-0506	09/24/18 10:01	09/27/18 8:43	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8355	VC-PM323-SS03-000H	09/24/18 9:20	09/27/18 8:43	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8356	VC-PM323-SB03-0102	09/24/18 9:23	09/27/18 8:43	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8357	VC-PM323-SB03-0506	09/24/18 10:30	09/27/18 8:44	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8358	VC-PM323-DW01-0918	09/24/18 10:21	09/27/18 8:44	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8359	VC-PM323-DW03-0918	09/24/18 11:10	09/27/18 8:45	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8360	VC-PM324-SS01-000H	09/24/18 13:08	09/27/18 9:13	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8361	VC-PM324-SB01-0102	09/24/18 13:11	09/27/18 9:13	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8362	VC-PM324-SB01-0506	09/24/18 13:30	09/27/18 9:14	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8363	VC-PM324-SS03-000H	09/24/18 10:49	09/27/18 9:15	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8364	VC-PM324-SB03-0102	09/24/18 10:50	09/27/18 9:15	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8365	VC-PM324-SB03-0506	09/24/18 11:02	09/27/18 9:16	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8366	VC-PM324-SB03-0102-MS	09/24/18 10:50	09/27/18 9:16	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8367	VC-PM324-SB03-0102-MSD	09/24/18 10:50	09/27/18 9:17	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8368	VC-SO-FB05-092418	09/24/18 13:30	09/27/18 9:17	2	AQ	0.2	NA	NA	NA	R0119 (NA)			
J8369	VC-SO-EB05-092418	09/24/18 13:30	09/27/18 9:18	2	AQ	0.2	NA	NA	NA	R0119 (NA)			
J8370	VC-PM324-DW01-0918	09/24/18 13:45	09/27/18 9:19	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8371	VC-PM324-DW01P-0918	09/24/18 14:02	09/27/18 9:19	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8372	VC-PM324-DW03-0918	09/24/18 11:15	09/27/18 9:20	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8373	VC-PM64B-SS01-000H	09/24/18 14:34	09/27/18 9:21	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8374	VC-PM64B-SB01-0102	09/24/18 14:38	09/27/18 9:22	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8375	VC-PM64B-SB01-0506	09/24/18 14:50	09/27/18 9:22	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8376	VC-PM64B-SS02-000H	09/24/18 15:02	09/27/18 9:23	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8377	VC-PM64B-SB02-0102	09/24/18 15:03	09/27/18 9:23	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8378	VC-PM64B-SB02-0506	09/24/18 15:16	09/27/18 9:24	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8379	VC-PM64B-SS03-000H	09/24/18 13:52	09/27/18 9:24	1	SS	0.9	NA	NA	NA	R0119 (NA)			

BATTELLE
It can be done

ShpNo SHP-180927-02

Battelle Project No: 0110125-01

Sample Receipt Form Details

Approved: ☑ **Authorized** ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Thursday, September 27, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8380	VC-PM64B-SB03-0102	09/24/18 13:53	09/27/18 9:24	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8381	VC-PM64B-SB03-0506	09/24/18 14:13	09/27/18 9:24	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8382	VC-PM64B-DW01-0918	09/24/18 15:00	09/27/18 9:25	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8383	VC-PM64B-DW02-0918	09/24/18 15:31	09/27/18 9:26	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8384	VC-PM64B-DW03-0918	09/24/18 14:28	09/27/18 9:26	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8385	VC-PM64B-DW03P-0918	09/24/18 14:35	09/27/18 9:26	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8386	VC-HS09-SB01-0102	09/25/18 13:21	09/27/18 9:27	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8387	VC-HS09-SB01-0506	09/25/18 14:04	09/27/18 9:28	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8388	VC-HS09-SB02-0102	09/25/18 14:39	09/27/18 9:28	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8389	VC-HS09-SB02-0506	09/25/18 14:47	09/27/18 9:29	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8390	VC-HS09-SS03-000H	09/25/18 12:54	09/27/18 9:29	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8391	VC-HS09-SB03-0102	09/25/18 12:55	09/27/18 9:29	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8392	VC-HS09-SB03-0506	09/25/18 13:05	09/27/18 9:30	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8393	VC-HS09-SB03-0506-MS	09/25/18 13:05	09/27/18 9:30	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8394	VC-HS09-SB03-0506-MSD	09/25/18 13:05	09/27/18 9:30	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8395	VC-HS09-DW01-0918	09/25/18 14:25	09/27/18 9:31	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8396	VC-HS09-DW02-0918	09/25/18 15:03	09/27/18 9:31	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8397	VC-HS09-DW03-0918	09/25/18 13:19	09/27/18 9:31	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8398	VC-AQ-FB-092518	09/25/18 14:35	09/27/18 9:32	2	AQ	0.2	NA	NA	NA	R0119 (NA)			
J8399	VC-AQ-EB-092518	09/25/18 14:30	09/27/18 9:32	2	AQ	0.2	NA	NA	NA	R0119 (NA)			
J8400	VC-HS09-DW03P-0918	09/25/18 13:56	09/27/18 9:33	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8401	VC-HS09-SS01-000H	09/25/18 13:20	09/27/18 9:33	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8402	VC-HS09-SS02-000H	09/25/18 14:35	09/27/18 9:34	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8403	VC-AOC16-SS01-000H	09/25/18 9:43	09/27/18 9:35	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8404	VC-AOC16-SB01-0102	09/25/18 9:43	09/27/18 9:35	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8405	VC-AOC16-SB01-0506	09/25/18 9:57	09/27/18 9:35	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8406	VC-AOC16-SS02-000H	09/25/18 10:05	09/27/18 9:36	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8407	VC-AOC16-SB02-0102	09/25/18 10:06	09/27/18 9:37	1	SB	0.9	NA	NA	NA	R0119 (NA)			

BATTELLE
It can be done

ShpNo SHP-180927-02

Battelle Project No: 0110125-01

Sample Receipt Form Details

Approved: ☑ **Authorized** ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Thursday, September 27, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8408	VC-AOC16-SB02-0506	09/25/18 10:10	09/27/18 9:37	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8409	VC-AOC16-SS03-000H	09/25/18 9:43	09/27/18 9:37	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8410	VC-AOC16-SB03-0102	09/25/18 9:44	09/27/18 9:38	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8411	VC-AOC16-SB03-0506	09/25/18 9:53	09/27/18 9:38	1	SB	0.9	NA	NA	NA	R0119 (NA)			

Total Samples: 60

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Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM 323	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 #: 3
Project Name: NBVC Basewide SI Project No.: 675803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page#: 1 of 10

Sample Identification		Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod
VC-PM323-SS01-000H	J8352	9/24/18	0952	Grab	SS	1	X
VC-PM323-SB01-0102	J8353	9/24/18	0953	Grab	SB	1	X
VC-PM323-SB01-0506	J8354	9/24/18	1001	Grab	SB	1	X
~~VC-PM323-SS02-000H~~				Grab	SS		X
~~VC-PM323-SB02-___~~				Grab	SB		X
~~VC-PM323-SB02-___~~				Grab	SB		X
VC-PM323-SS03-000H	J8355	9/24/18	0920	Grab	SS	1	X
VC-PM323-SB03-0102	J8356	9/24/18	0923	Grab	SB	1	X
VC-PM323-SB03-0506	J8357	9/24/18	1030	Grab	SB	1	X
~~VC-PM323-S-___-___-MS~~				Grab			X
~~VC-PM323-S-___-___-SD~~				Grab			X
~~FDT-SO-FB-___-___~~				Grab	AQ		X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Victoria Kilbert	Jacobs	9/26/18 1400	[signature]	Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM 323	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-577-8628 Email: victoria.kilbert@jacobs.com Turnaround Time (TAT) Requested:	Preservative: NA	COC #: 3
Project Name: NBVC Basewide SI	Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page#: 2 of 10
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod
VC-PM323-DW01-0918 18358	9/24/18	1021	Grab	GW	2	X
~~VC-PM323-DW02~~			~~Grab~~	~~GW~~		~~X~~
~~VC-PM323-DW02P~~			~~Grab~~	~~GW~~		~~X~~
VC-PM323-DW03-0918 18359	9/24/18	1110	Grab	GW	2	X
~~FDT-AQ-FB~~			~~Grab~~	~~AQ~~		~~X~~
~~FDT-AQ-EB~~			~~Grab~~	~~AQ~~		~~X~~

VOA

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	9/26/18 1400	MM	Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM324	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 # 3
Project Name: NBVC Basewide SI Project No.: 695803	Normal ☒ Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 3 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod
VC-PM324-SS01-000H J8360	9/24/18	1308	Grab	SS	1	X
VC-PM324-SB01-0102 J8361	9/24/18	1311	Grab	SB	1	X
VC-PM324-SB01-0506 J8362	9/24/18	1330	Grab	SB	1	X
~~VC-PM324-SS02-000H~~			Grab	SS		X
~~VC-PM324-SB02-~~			Grab	SB		X
~~VC-PM324-SB02-~~			Grab	SB		X
VC-PM324-SS03-000H J8363	9/24/18	1049	Grab	SS	1	X
VC-PM324-SB03-0102 J8364	9/24/18	1050	Grab	SB	1	X
VC-PM324-SB03-0506 J8365	9/24/18	1102	Grab	SB	1	X
VC-PM324-SB03-0102-MS	9/24/18	1050	Grab	SB	1	X
VC-PM324-SB03-0102-MSD	9/24/18	1050	Grab	SB	1	X
~~EDT-SO-FB05~~ - 092418	9/24/18	1330	Grab	AQ	2	X

J8366 (VB)
J8367
J8368 VC

~~GW SCREEN~~

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	9/24/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

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

Project Manager: Eric Davis
Sampler Information (print name): V Kilbert
Phone: 724-977-3628
Email: victoria.kilbert@jacobs.com
Turnaround Time (TAT) Requested:
Normal X
Priority ☐
RUSH ☐

Project Name: NBVC Basewide SI
Project No.: 695803
Time Zone: PST

Sampling Site: PM324
Site Information:

COC # 3
Page# 4 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod
~~FDT~~-SO-EB-05-092418 J8369	9/24/18	1330	Grab	AQ	2		X

on GW screen

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	9/24/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM 324	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email: victoria.kilbert@jacobs.com Turnaround Time (TAT) Requested:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 5 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod
VC-PM324-DW01-0918 J8370	9/24/18	1345	Grab	GW	2	X
VC-PM324-DW01P-0918 J8371	9/24/18	1402	Grab	GW	2	X
~~VC-PM324-DW02~~			~~Grab~~	~~GW~~		X
VC-PM324-DW03-0918 J8372	9/24/18	1115	Grab	GW	2	X
~~FDT-AQ-FB~~			Grab	AQ		X
~~FDT-AQ-EB~~			~~Grab~~	~~AQ~~		X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	9/24/18 1400	M	Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM64B	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	Normal ☒ Priority ☐ RUSH ☐		COC # 3
Project No.: 695803	Time Zone: PST		Page# 6 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: Preservative NA	Analysis: PFAS by Method 537 Mod
VC-PM64B-SS01-000H J8373	9/24/18	1434	Grab	SS	1		X
VC-PM64B-SB01-0102 J8374	9/24/18	1438	Grab	SB	1		X
VC-PM64B-SB01-0506 J8375	9/24/18	1450	Grab	SB	1		X
VC-PM64B-SS02-000H J8376	9/24/18	1502	Grab	SS	1		X
VC-PM64B-SB02-0102 J8377	9/24/18	1503	Grab	SB	1		X
VC-PM64B-SB02-0506 J8378	9/24/18	1516	Grab	SB	1		X
VC-PM64B-SS03-000H J8379	9/24/18	1352	Grab	SS	1		X
VC-PM64B-SB03-0102 J8380	9/24/18	1353	Grab	SB	1		X
VC-PM64B-SB03-0506 J8381	9/24/18	1413	Grab	SB	1		X
~~VC-PM64B-S MS~~			~~Grab~~				X
~~VC-PM64B-S SD~~			~~Grab~~				X
~~FDT-SO-FB~~			~~Grab~~	~~AQ~~			X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V Kilbert	Jacobs	9/26/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM64B	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: Email: 724.977-3628 Turnaround Time (TAT) Requested:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 7 of 10
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod
VC-PM64B-DW01-0918 J8382	9/24/18	1500	Grab	GW	2	X
VC-PM64B-DW02-0918 J8383	9/24/18	1531	Grab	GW	2	X
VC-PM64B-DW03-0918 J8384	9/24/18	1428	Grab	GW	2	X
VC-PM64B-DW03P-0918 J8385	9/24/18	1435	Grab	GW	2	X
~~FDT-AQ-EB~~			Grab	AQ		X
~~FDT-AQ-EB~~			Grab	AQ		X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	9/26/18 1700		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: HS09	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 8 of 10
Project No.: 695503	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod
VC-HS09-SB01-0102 J8386	9/25/18	1321	Grab	SB	1	X
VC-HS09-SB01-0506 J8387	9/25/18	1404	Grab	SB	1	X
VC-HS09-SB02-0102 J8388	9/25/18	1439	Grab	SB	1	X
VC-HS09-SB02-0506 J8389	9/25/18	1447	Grab	SB	1	X
VC-HS09-SS03-0004 J8390	9/25/18	1254	Grab	SS	1	X
VC-HS09-SB03-0102 J8391	9/25/18	1255	Grab	SB	1	X
VC-HS09-SB03-0506 J8392	9/25/18	1305	Grab	SB	1	X
J8393 VC-HS09-SB03-0506-MS	9/25/18	1305	Grab	SB	1	X
J8394 VC-HS09-SB03-0506-MSD	9/25/18	1305	Grab	SB	1	X
~~FDT-SO-FB~~			~~Grab~~	~~AQ~~		~~X~~
~~FDT-SO-EB~~			~~Grab~~	~~AQ~~		~~X~~

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	9/26/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: HS09	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbut Phone: 724-977-3628 Email:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 9 of 10
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod
~~VC-S09GW01-___~~			~~Grab~~	~~GW~~		X
~~VC-S09GW04-___~~			~~Grab~~	~~GW~~		X
~~VC-S09GW04P-___~~			~~Grab~~	~~GW~~		X
VC-HS09-DW01-0918 J8395	9/25/18	1425	Grab	GW	2	X
VC-HS09-DW02-0918 J8396	9/25/18	1503	Grab	GW	2	X
VC-HS09-DW03-0918 J8397	9/25/18	1319	Grab	GW	2	X
VC-~~FDT~~-AQ-FB___-092518 J8398	9/25/18	1435	Grab	AQ	2	X
VC-~~FDT~~-AQ-EB___-092518 J8399	9/25/18	~~1350~~ 1439	Grab	AQ	2	X
J8400 VC-HS09-DW03P-0918	9/25/18	1356	Grab	GW	2	X
J8401 VC-HS09-SS01-000H	9/25/18	1320	Grab	SS	1	X
J8402 VC-HS09-SS02-000H	9/25/18	1435	Grab	SS	1	X
			~~Grab~~			

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 Kilbut	J. cobs	9/26/18 1400	NM	Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

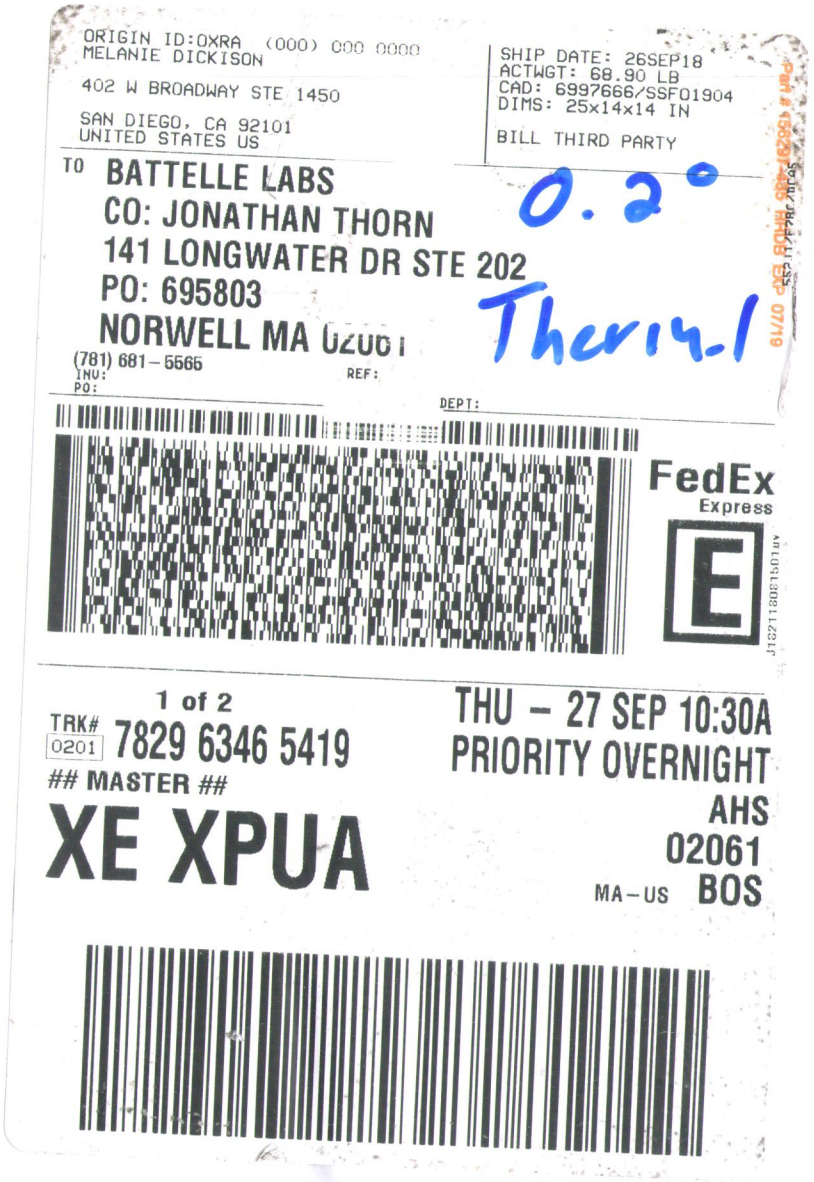
Client Contact Information	Project Manager: Eric Davis	Sampling Site: AOC 16	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested:	Analysis: PFAS by Method 537 Mod	Page# 10 of 10
Project No.: 695803	Normal X Priority ☐ RUSH ☐		
	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod
VC-AOC16-SS01-000H J8403	7/25/18	0943	Grab	SS	1	X
VC-AOC16-SB01-0918 J8404	7/25/18	0944	Grab	SB	1	X
VC-AOC16-SB01-0918 J8405	7/25/18	0957	Grab	SB	1	X
VC-AOC16-SS02-000H J8406	7/25/18	1005	Grab	SS	1	X
VC-AOC16-SB02-0918 J8407	7/25/18	1006	Grab	SB	1	X
VC-AOC16-SB02-0918 J8408	7/25/18	1010	Grab	SB	1	X
VC-AOC16-SS03-000H J8409	7/25/18	0943	Grab	SS	1	X
VC-AOC16-SB03-0918 J8410	7/25/18	0944	Grab	SB	1	X
VC-AOC16-SB03-0918 J8411	7/25/18	0953	Grab	SB	1	X
~~VC-AOC16-S - -MS~~			~~Grab~~			X
~~VC-AOC16-S - -SD~~			~~Grab~~			X
~~FDT-SO-EB~~			~~Grab~~	AQ		X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	7/26/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:


ORIGIN ID:OXRA (000) 000 0000
MELANIE DICKISON
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US
SHIP DATE: 26SEP18
ACTWGT: 68.90 LB
CAD: 6997666/SSFO1904
DIMS: 25x14x14 IN
BILL THIRD PARTY
TO BATTELLE LABS
CO: JONATHAN THORN
141 LONGWATER DR STE 202
PO: 695803
NORWELL MA 02061
(781) 681-5565
INV:
PO:
REF:
DEPT:
0.2°
Therm_1
FedEx
Express
1 of 2
TRK# 0201 7829 6346 5419
MASTER
XE XPUA
THU - 27 SEP 10:30A
PRIORITY OVERNIGHT
AHS
02061
MA-US BOS


ORIGIN ID:OXRA (000) 000-0000
MELANIE DICKISON
402 W BROADWAY STE 1450
SAN DIEGO, CA 92101
UNITED STATES US
SHIP DATE: 26SEP18
ACTWGT: 58.30 LB
CAD: 6997666/SSFO1904
DIMS: 22x14x16 IN
BILL THIRD PARTY
TO BATTELLE LABS
CO: JONATHAN THORN
141 LONGWATER DR STE 202
PO: 695803
NORWELL MA 02061
(781) 681-5565
INV:
PO:
REF:
DEPT:
0.9°
Therm_1
FedEx
Express
2 of 2
MPS# 0263 7829 6346 5420
Mstr# 7829 6346 5419
0201
XE XPUA
THU - 27 SEP 10:30A
PRIORITY OVERNIGHT
AHS
02061
MA-US BOS

Data Tables

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

Client ID		VC-PM64B-SB03-0506				
Battelle ID		J8381-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		10.07				
Matrix		SB				
Sample Size		1.820				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.10	U	0.36	1.10	5.49
PFHpA	375-85-9	1.10	U	0.48	1.10	5.49
PFOA	335-67-1	1.10	U	0.55	1.10	5.49
PFNA	375-95-1	1.10	U	0.47	1.10	5.49
PFDA	335-76-2	1.10	U	0.30	1.10	5.49
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.49
PFDoA	307-55-1	0.55	U	0.26	0.55	5.49
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.49
PFTeDA	376-06-7	2.20	U	0.69	2.20	5.49
NMeFOSAA	2355-31-9	2.75	U	1.23	2.75	5.49
NEtFOSAA	2991-50-6	2.20	U	0.63	2.20	5.49
PFBS	375-73-5	1.10	U	0.40	1.10	5.49
PFHxS	355-46-4	1.37	J	0.24	0.55	5.49
PFOS	1763-23-1	3.22	J	0.30	1.10	5.49

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	120
13C8-PFOA	130
13C9-PFNA	125
13C6-PFDA	122
13C7-PFUnA	133
13C2-PFDoA	120
13C2-PFTeDA	125
d3-MeFOSAA	112
d5-EtFOSAA	119
13C3-PFBS	115
13C3-PFHxS	114
13C8-PFOS	104

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

Client ID		VC-HS09-SB01-0102				
Battelle ID		J8386-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		6.91				
Matrix		SB				
Sample Size		1.860				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.08	U	0.35	1.08	5.38
PFHpA	375-85-9	0.50	J	0.47	1.08	5.38
PFOA	335-67-1	3.61	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	3.74	J	0.24	0.54	5.38
PFOS	1763-23-1	19.21		0.29	1.08	5.38

Surrogate Recoveries (%)

13C5-PFHxA	119
13C4-PFHpA	121
13C8-PFOA	119
13C9-PFNA	109
13C6-PFDA	127
13C7-PFUnA	93
13C2-PFDoA	114
13C2-PFTeDA	126
d3-MeFOSAA	119
d5-EtFOSAA	80
13C3-PFBS	126
13C3-PFHxS	127
13C8-PFOS	113

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

Client ID		VC-HS09-SB01-0506				
Battelle ID		J8387-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		12.36				
Matrix		SB				
Sample Size		1.760				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.14	U	0.38	1.14	5.68
PFHpA	375-85-9	1.14	U	0.50	1.14	5.68
PFOA	335-67-1	0.65	J	0.57	1.14	5.68
PFNA	375-95-1	1.14	U	0.49	1.14	5.68
PFDA	335-76-2	1.14	U	0.31	1.14	5.68
PFUnA	2058-94-8	1.14	U	0.47	1.14	5.68
PFDoA	307-55-1	0.57	U	0.27	0.57	5.68
PFTrDA	72629-94-8	1.14	U	0.32	1.14	5.68
PFTeDA	376-06-7	2.27	U	0.72	2.27	5.68
NMeFOSAA	2355-31-9	2.84	U	1.27	2.84	5.68
NEtFOSAA	2991-50-6	2.27	U	0.65	2.27	5.68
PFBS	375-73-5	1.14	U	0.41	1.14	5.68
PFHxS	355-46-4	0.37	J	0.25	0.57	5.68
PFOS	1763-23-1	1.02	J	0.31	1.14	5.68

Surrogate Recoveries (%)

13C5-PFHxA	114
13C4-PFHpA	118
13C8-PFOA	122
13C9-PFNA	116
13C6-PFDA	118
13C7-PFUnA	117
13C2-PFDoA	117
13C2-PFTeDA	117
d3-MeFOSAA	115
d5-EtFOSAA	115
13C3-PFBS	131
13C3-PFHxS	113
13C8-PFOS	125

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

Client ID		VC-HS09-SB02-0102			
Battelle ID		J8388-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		7.28			
Matrix		SB			
Sample Size		1.910			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.05 U	0.35	1.05	5.24
PFHpA	375-85-9	1.05 U	0.46	1.05	5.24
PFOA	335-67-1	0.57 J	0.52	1.05	5.24
PFNA	375-95-1	1.05 U	0.45	1.05	5.24
PFDA	335-76-2	1.05 U	0.28	1.05	5.24
PFUnA	2058-94-8	1.05 U	0.43	1.05	5.24
PFDoA	307-55-1	0.52 U	0.25	0.52	5.24
PFTrDA	72629-94-8	1.05 U	0.29	1.05	5.24
PFTeDA	376-06-7	2.09 U	0.66	2.09	5.24
NMeFOSAA	2355-31-9	2.62 U	1.17	2.62	5.24
NEtFOSAA	2991-50-6	2.09 U	0.60	2.09	5.24
PFBS	375-73-5	1.05 U	0.38	1.05	5.24
PFHxS	355-46-4	0.52 U	0.23	0.52	5.24
PFOS	1763-23-1	1.05 U	0.28	1.05	5.24

Surrogate Recoveries (%)

13C5-PFHxA	127
13C4-PFHpA	122
13C8-PFOA	127
13C9-PFNA	115
13C6-PFDA	123
13C7-PFUnA	134
13C2-PFDoA	120
13C2-PFTeDA	119
d3-MeFOSAA	109
d5-EtFOSAA	107
13C3-PFBS	94
13C3-PFHxS	99
13C8-PFOS	112

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

Client ID		VC-HS09-SB02-0506			
Battelle ID		J8389-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		17.47			
Matrix		SB			
Sample Size		1.700			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.18 U	0.39	1.18	5.88
PFHpA	375-85-9	1.18 U	0.52	1.18	5.88
PFOA	335-67-1	0.66 J	0.59	1.18	5.88
PFNA	375-95-1	1.18 U	0.51	1.18	5.88
PFDA	335-76-2	1.18 U	0.32	1.18	5.88
PFUnA	2058-94-8	1.18 U	0.48	1.18	5.88
PFDoA	307-55-1	0.59 U	0.28	0.59	5.88
PFTrDA	72629-94-8	1.18 U	0.33	1.18	5.88
PFTeDA	376-06-7	2.35 U	0.74	2.35	5.88
NMeFOSAA	2355-31-9	2.94 U	1.32	2.94	5.88
NEtFOSAA	2991-50-6	2.35 U	0.67	2.35	5.88
PFBS	375-73-5	1.18 U	0.42	1.18	5.88
PFHxS	355-46-4	0.59 U	0.26	0.59	5.88
PFOS	1763-23-1	1.18 U	0.32	1.18	5.88

Surrogate Recoveries (%)

13C5-PFHxA	121
13C4-PFHpA	121
13C8-PFOA	127
13C9-PFNA	126
13C6-PFDA	129
13C7-PFUnA	134
13C2-PFDoA	120
13C2-PFTeDA	123
d3-MeFOSAA	115
d5-EtFOSAA	107
13C3-PFBS	114
13C3-PFHxS	118
13C8-PFOS	131

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

Client ID		VC-HS09-SS03-000H			
Battelle ID		J8390-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		12.32			
Matrix		SS			
Sample Size		1.780			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.12 U	0.37	1.12	5.62
PFHpA	375-85-9	1.12 U	0.49	1.12	5.62
PFOA	335-67-1	0.73 J	0.56	1.12	5.62
PFNA	375-95-1	1.12 U	0.48	1.12	5.62
PFDA	335-76-2	1.12 U	0.30	1.12	5.62
PFUnA	2058-94-8	1.12 U	0.46	1.12	5.62
PFDoA	307-55-1	0.56 U	0.27	0.56	5.62
PFTrDA	72629-94-8	1.12 U	0.31	1.12	5.62
PFTeDA	376-06-7	2.25 U	0.71	2.25	5.62
NMeFOSAA	2355-31-9	2.81 U	1.26	2.81	5.62
NEtFOSAA	2991-50-6	2.25 U	0.64	2.25	5.62
PFBS	375-73-5	1.12 U	0.40	1.12	5.62
PFHxS	355-46-4	0.56 U	0.25	0.56	5.62
PFOS	1763-23-1	1.44 J	0.30	1.12	5.62

Surrogate Recoveries (%)

13C5-PFHxA	128
13C4-PFHpA	121
13C8-PFOA	131
13C9-PFNA	131
13C6-PFDA	125
13C7-PFUnA	133
13C2-PFDoA	115
13C2-PFTeDA	122
d3-MeFOSAA	128
d5-EtFOSAA	139
13C3-PFBS	126
13C3-PFHxS	121
13C8-PFOS	124

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

Client ID		VC-HS09-SB03-0102				
Battelle ID		J8391-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		12.02				
Matrix		SB				
Sample Size		1.810				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.10	U	0.36	1.10	5.52
PFHpA	375-85-9	1.10	U	0.49	1.10	5.52
PFOA	335-67-1	1.10	U	0.55	1.10	5.52
PFNA	375-95-1	1.10	U	0.48	1.10	5.52
PFDA	335-76-2	1.10	U	0.30	1.10	5.52
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.52
PFDoA	307-55-1	0.55	U	0.27	0.55	5.52
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.52
PFTeDA	376-06-7	2.21	U	0.70	2.21	5.52
NMeFOSAA	2355-31-9	2.76	U	1.24	2.76	5.52
NEtFOSAA	2991-50-6	2.21	U	0.63	2.21	5.52
PFBS	375-73-5	1.10	U	0.40	1.10	5.52
PFHxS	355-46-4	0.55	U	0.24	0.55	5.52
PFOS	1763-23-1	0.53	J	0.30	1.10	5.52

Surrogate Recoveries (%)

13C5-PFHxA	125
13C4-PFHpA	136
13C8-PFOA	130
13C9-PFNA	140
13C6-PFDA	129
13C7-PFUnA	133
13C2-PFDoA	116
13C2-PFTeDA	126
d3-MeFOSAA	116
d5-EtFOSAA	134
13C3-PFBS	120
13C3-PFHxS	126
13C8-PFOS	133

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

Client ID		VC-HS09-SB03-0506			
Battelle ID		J8392-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		18.92			
Matrix		SB			
Sample Size		1.660			
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	109
13C4-PFHpA	112
13C8-PFOA	118
13C9-PFNA	108
13C6-PFDA	133
13C7-PFUnA	129
13C2-PFDoA	121
13C2-PFTeDA	116
d3-MeFOSAA	118
d5-EtFOSAA	114
13C3-PFBS	101
13C3-PFHxS	112
13C8-PFOS	110

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

Client ID		VC-HS09-SS01-000H			
Battelle ID		J8401-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		5.00			
Matrix		SS			
Sample Size		1.940			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.75 J	0.34	1.03	5.15
PFHpA	375-85-9	0.77 J	0.45	1.03	5.15
PFOA	335-67-1	2.78 J	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	0.42 J	0.37	1.03	5.15
PFHxS	355-46-4	7.22	0.23	0.52	5.15
PFOS	1763-23-1	22.48	0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	123
13C4-PFHpA	129
13C8-PFOA	121
13C9-PFNA	120
13C6-PFDA	126
13C7-PFUnA	123
13C2-PFDoA	116
13C2-PFTeDA	124
d3-MeFOSAA	98
d5-EtFOSAA	110
13C3-PFBS	116
13C3-PFHxS	117
13C8-PFOS	120

BATTELLE
It can be done

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

Client ID		VC-HS09-SS02-000H				
Battelle ID		J8402-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		8.80				
Matrix		SS				
Sample Size		1.830				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.09	U	0.36	1.09	5.46
PFHpA	375-85-9	1.09	U	0.48	1.09	5.46
PFOA	335-67-1	0.67	J	0.55	1.09	5.46
PFNA	375-95-1	1.09	U	0.47	1.09	5.46
PFDA	335-76-2	1.09	U	0.30	1.09	5.46
PFUnA	2058-94-8	1.09	U	0.45	1.09	5.46
PFDoA	307-55-1	0.55	U	0.26	0.55	5.46
PFTrDA	72629-94-8	1.09	U	0.31	1.09	5.46
PFTeDA	376-06-7	2.19	U	0.69	2.19	5.46
NMeFOSAA	2355-31-9	2.73	U	1.22	2.73	5.46
NEtFOSAA	2991-50-6	2.19	U	0.62	2.19	5.46
PFBS	375-73-5	1.09	U	0.39	1.09	5.46
PFHxS	355-46-4	0.55	U	0.24	0.55	5.46
PFOS	1763-23-1	0.62	J	0.30	1.09	5.46

Surrogate Recoveries (%)

13C5-PFHxA	122
13C4-PFHpA	123
13C8-PFOA	125
13C9-PFNA	118
13C6-PFDA	125
13C7-PFUnA	125
13C2-PFDoA	120
13C2-PFTeDA	115
d3-MeFOSAA	109
d5-EtFOSAA	100
13C3-PFBS	114
13C3-PFHxS	121
13C8-PFOS	120

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

Client ID		VC-AOC16-SS01-000H				
Battelle ID		J8403-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		10.38				
Matrix		SS				
Sample Size		1.850				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	3.23	J	0.36	1.08	5.41
PFHpA	375-85-9	3.02	J	0.48	1.08	5.41
PFOA	335-67-1	28.54		0.54	1.08	5.41
PFNA	375-95-1	1.67	J	0.46	1.08	5.41
PFDA	335-76-2	1.08	U	0.29	1.08	5.41
PFUnA	2058-94-8	1.08	U	0.44	1.08	5.41
PFDoA	307-55-1	0.54	U	0.26	0.54	5.41
PFTrDA	72629-94-8	1.08	U	0.30	1.08	5.41
PFTeDA	376-06-7	2.16	U	0.68	2.16	5.41
NMeFOSAA	2355-31-9	2.70	U	1.21	2.70	5.41
NEtFOSAA	2991-50-6	2.16	U	0.62	2.16	5.41
PFBS	375-73-5	1.08	U	0.39	1.08	5.41
PFHxS	355-46-4	51.28		0.24	0.54	5.41
PFOS	1763-23-1	619.80	D	2.92	10.81	54.05

Surrogate Recoveries (%)

13C5-PFHxA	128	
13C4-PFHpA	125	
13C8-PFOA	121	
13C9-PFNA	110	
13C6-PFDA	139	
13C7-PFUnA	147	
13C2-PFDoA	133	
13C2-PFTeDA	132	
d3-MeFOSAA	105	D
d5-EtFOSAA	126	D
13C3-PFBS	109	D
13C3-PFHxS	115	D
13C8-PFOS	143	

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

Client ID		VC-AOC16-SB01-0102			
Battelle ID		J8404-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		12.48			
Matrix		SB			
Sample Size		1.750			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	12.97	0.38	1.14	5.71
PFHpA	375-85-9	12.80	0.50	1.14	5.71
PFOA	335-67-1	127.82 D	1.43	2.86	14.29
PFNA	375-95-1	0.72 J	0.49	1.14	5.71
PFDA	335-76-2	1.14 U	0.31	1.14	5.71
PFUnA	2058-94-8	1.14 U	0.47	1.14	5.71
PFDoA	307-55-1	0.57 U	0.27	0.57	5.71
PFTrDA	72629-94-8	1.14 U	0.32	1.14	5.71
PFTeDA	376-06-7	2.29 U	0.72	2.29	5.71
NMeFOSAA	2355-31-9	2.86 U	1.28	2.86	5.71
NEtFOSAA	2991-50-6	2.29 U	0.65	2.29	5.71
PFBS	375-73-5	1.08 J	0.41	1.14	5.71
PFHxS	355-46-4	108.81 D	0.63	1.43	14.29
PFOS	1763-23-1	297.43 D	1.54	5.71	28.57

Surrogate Recoveries (%)

13C5-PFHxA	118
13C4-PFHpA	112
13C8-PFOA	106
13C9-PFNA	111
13C6-PFDA	117
13C7-PFUnA	119
13C2-PFDoA	114
13C2-PFTeDA	114
d3-MeFOSAA	105
d5-EtFOSAA	133
13C3-PFBS	134
13C3-PFHxS	125
13C8-PFOS	118

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

Client ID		VC-AOC16-SB01-0506			
Battelle ID		J8405-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.18			
Matrix		SB			
Sample Size		1.580			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	15.71	0.42	1.27	6.33
PFHpA	375-85-9	1.92 J	0.56	1.27	6.33
PFOA	335-67-1	1.45 J	0.63	1.27	6.33
PFNA	375-95-1	1.27 U	0.54	1.27	6.33
PFDA	335-76-2	1.27 U	0.34	1.27	6.33
PFUnA	2058-94-8	1.27 U	0.52	1.27	6.33
PFDoA	307-55-1	0.63 U	0.30	0.63	6.33
PFTrDA	72629-94-8	1.27 U	0.35	1.27	6.33
PFTeDA	376-06-7	2.53 U	0.80	2.53	6.33
NMeFOSAA	2355-31-9	3.16 U	1.42	3.16	6.33
NEtFOSAA	2991-50-6	2.53 U	0.72	2.53	6.33
PFBS	375-73-5	4.53 J	0.46	1.27	6.33
PFHxS	355-46-4	1.86 J	0.28	0.63	6.33
PFOS	1763-23-1	3.72 J	0.34	1.27	6.33

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	114
13C8-PFOA	120
13C9-PFNA	123
13C6-PFDA	143
13C7-PFUnA	145
13C2-PFDoA	129
13C2-PFTeDA	125
d3-MeFOSAA	129
d5-EtFOSAA	141
13C3-PFBS	122
13C3-PFHxS	123
13C8-PFOS	135

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

Client ID		VC-AOC16-SS02-000H				
Battelle ID		J8406-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		10.10				
Matrix		SS				
Sample Size		1.800				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	9.87		0.37	1.11	5.56
PFHpA	375-85-9	1.89	J	0.49	1.11	5.56
PFOA	335-67-1	6.02		0.56	1.11	5.56
PFNA	375-95-1	0.71	J	0.48	1.11	5.56
PFDA	335-76-2	1.11	U	0.30	1.11	5.56
PFUnA	2058-94-8	1.11	U	0.46	1.11	5.56
PFDoA	307-55-1	0.56	U	0.27	0.56	5.56
PFTrDA	72629-94-8	1.11	U	0.31	1.11	5.56
PFTeDA	376-06-7	2.22	U	0.70	2.22	5.56
NMeFOSAA	2355-31-9	2.78	U	1.24	2.78	5.56
NEtFOSAA	2991-50-6	2.22	U	0.63	2.22	5.56
PFBS	375-73-5	0.82	J	0.40	1.11	5.56
PFHxS	355-46-4	52.67		0.24	0.56	5.56
PFOS	1763-23-1	1365.15	D	5.00	18.52	92.59

Surrogate Recoveries (%)

13C5-PFHxA	131	
13C4-PFHpA	123	
13C8-PFOA	114	
13C9-PFNA	95	
13C6-PFDA	130	
13C7-PFUnA	129	
13C2-PFDoA	114	
13C2-PFTeDA	116	
d3-MeFOSAA	103	D
d5-EtFOSAA	132	D
13C3-PFBS	97	D
13C3-PFHxS	97	D
13C8-PFOS	147	

BATTELLE
It can be done

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

Client ID		VC-AOC16-SB02-0102				
Battelle ID		J8407-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		9.75				
Matrix		SB				
Sample Size		1.830				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	14.94		0.36	1.09	5.46
PFHpA	375-85-9	4.68	J	0.48	1.09	5.46
PFOA	335-67-1	33.53		0.55	1.09	5.46
PFNA	375-95-1	1.30	J	0.47	1.09	5.46
PFDA	335-76-2	1.09	U	0.30	1.09	5.46
PFUnA	2058-94-8	1.09	U	0.45	1.09	5.46
PFDoA	307-55-1	0.55	U	0.26	0.55	5.46
PFTrDA	72629-94-8	1.09	U	0.31	1.09	5.46
PFTeDA	376-06-7	2.19	U	0.69	2.19	5.46
NMeFOSAA	2355-31-9	2.73	U	1.22	2.73	5.46
NEtFOSAA	2991-50-6	2.19	U	0.62	2.19	5.46
PFBS	375-73-5	1.39	J	0.39	1.09	5.46
PFHxS	355-46-4	117.52	D	0.48	1.09	10.93
PFOS	1763-23-1	834.11	D	3.69	13.66	68.31

Surrogate Recoveries (%)

13C5-PFHxA	127	
13C4-PFHpA	127	
13C8-PFOA	113	
13C9-PFNA	110	
13C6-PFDA	133	
13C7-PFUnA	124	
13C2-PFDoA	123	
13C2-PFTeDA	120	
d3-MeFOSAA	126	D
d5-EtFOSAA	128	D
13C3-PFBS	122	D
13C3-PFHxS	135	D
13C8-PFOS	136	

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

Client ID		VC-AOC16-SB02-0506				
Battelle ID		J8408-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		19.28				
Matrix		SB				
Sample Size		1.630				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	38.14		0.40	1.23	6.13
PFHpA	375-85-9	3.15	J	0.54	1.23	6.13
PFOA	335-67-1	1.16	J	0.61	1.23	6.13
PFNA	375-95-1	1.23	U	0.53	1.23	6.13
PFDA	335-76-2	1.23	U	0.33	1.23	6.13
PFUnA	2058-94-8	1.23	U	0.50	1.23	6.13
PFDoA	307-55-1	0.61	U	0.29	0.61	6.13
PFTrDA	72629-94-8	1.23	U	0.34	1.23	6.13
PFTeDA	376-06-7	2.45	U	0.77	2.45	6.13
NMeFOSAA	2355-31-9	3.07	U	1.37	3.07	6.13
NEtFOSAA	2991-50-6	2.45	U	0.70	2.45	6.13
PFBS	375-73-5	9.69		0.44	1.23	6.13
PFHxS	355-46-4	9.40		0.27	0.61	6.13
PFOS	1763-23-1	20.63		0.33	1.23	6.13

Surrogate Recoveries (%)

13C5-PFHxA	115
13C4-PFHpA	115
13C8-PFOA	116
13C9-PFNA	116
13C6-PFDA	116
13C7-PFUnA	133
13C2-PFDoA	114
13C2-PFTeDA	114
d3-MeFOSAA	105
d5-EtFOSAA	113
13C3-PFBS	116
13C3-PFHxS	106
13C8-PFOS	119

BATTELLE
It can be done

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

Client ID		VC-AOC16-SS03-000H				
Battelle ID		J8409-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		9.77				
Matrix		SS				
Sample Size		1.810				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	6.47		0.36	1.10	5.52
PFHpA	375-85-9	1.95	J	0.49	1.10	5.52
PFOA	335-67-1	6.32		0.55	1.10	5.52
PFNA	375-95-1	0.59	J	0.48	1.10	5.52
PFDA	335-76-2	0.81	J	0.30	1.10	5.52
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.52
PFDoA	307-55-1	0.55	U	0.27	0.55	5.52
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.52
PFTeDA	376-06-7	2.21	U	0.70	2.21	5.52
NMeFOSAA	2355-31-9	2.76	U	1.24	2.76	5.52
NEtFOSAA	2991-50-6	2.21	U	0.63	2.21	5.52
PFBS	375-73-5	0.54	J	0.40	1.10	5.52
PFHxS	355-46-4	56.63		0.24	0.55	5.52
PFOS	1763-23-1	941.73	D	3.73	13.81	69.06

Surrogate Recoveries (%)

13C5-PFHxA	134	
13C4-PFHpA	130	
13C8-PFOA	126	
13C9-PFNA	106	
13C6-PFDA	121	
13C7-PFUnA	124	
13C2-PFDoA	124	
13C2-PFTeDA	117	
d3-MeFOSAA	116	D
d5-EtFOSAA	127	D
13C3-PFBS	105	D
13C3-PFHxS	105	D
13C8-PFOS	118	

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

Client ID		VC-AOC16-SB03-0102				
Battelle ID		J8410-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		11.65				
Matrix		SB				
Sample Size		1.820				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	7.09		0.36	1.10	5.49
PFHpA	375-85-9	1.86	J	0.48	1.10	5.49
PFOA	335-67-1	5.22	J	0.55	1.10	5.49
PFNA	375-95-1	1.10	U	0.47	1.10	5.49
PFDA	335-76-2	1.10	U	0.30	1.10	5.49
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.49
PFDoA	307-55-1	0.55	U	0.26	0.55	5.49
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.49
PFTeDA	376-06-7	2.20	U	0.69	2.20	5.49
NMeFOSAA	2355-31-9	2.75	U	1.23	2.75	5.49
NEtFOSAA	2991-50-6	2.20	U	0.63	2.20	5.49
PFBS	375-73-5	1.10	U	0.40	1.10	5.49
PFHxS	355-46-4	26.66		0.24	0.55	5.49
PFOS	1763-23-1	651.49	D	3.71	13.74	68.68

Surrogate Recoveries (%)

13C5-PFHxA	119	
13C4-PFHpA	112	
13C8-PFOA	122	
13C9-PFNA	102	
13C6-PFDA	127	
13C7-PFUnA	129	
13C2-PFDoA	111	
13C2-PFTeDA	110	
d3-MeFOSAA	112	D
d5-EtFOSAA	110	D
13C3-PFBS	99	D
13C3-PFHxS	109	D
13C8-PFOS	121	

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

Client ID		VC-AOC16-SB03-0506				
Battelle ID		J8411-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		19.60				
Matrix		SB				
Sample Size		1.640				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	14.21		0.40	1.22	6.10
PFHpA	375-85-9	2.77	J	0.54	1.22	6.10
PFOA	335-67-1	44.68		0.61	1.22	6.10
PFNA	375-95-1	1.22	U	0.52	1.22	6.10
PFDA	335-76-2	1.22	U	0.33	1.22	6.10
PFUnA	2058-94-8	1.22	U	0.50	1.22	6.10
PFDoA	307-55-1	0.61	U	0.29	0.61	6.10
PFTrDA	72629-94-8	1.22	U	0.34	1.22	6.10
PFTeDA	376-06-7	2.44	U	0.77	2.44	6.10
NMeFOSAA	2355-31-9	3.05	U	1.37	3.05	6.10
NEtFOSAA	2991-50-6	2.44	U	0.70	2.44	6.10
PFBS	375-73-5	3.54	J	0.44	1.22	6.10
PFHxS	355-46-4	8.55		0.27	0.61	6.10
PFOS	1763-23-1	0.90	J	0.33	1.22	6.10

Surrogate Recoveries (%)

13C5-PFHxA	109
13C4-PFHpA	104
13C8-PFOA	105
13C9-PFNA	109
13C6-PFDA	116
13C7-PFUnA	122
13C2-PFDoA	110
13C2-PFTeDA	108
d3-MeFOSAA	93
d5-EtFOSAA	106
13C3-PFBS	116
13C3-PFHxS	120
13C8-PFOS	121

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

Client ID		KB80 IB				
Battelle ID		KB80 IB_10/14/2018				
Sample Type		IB				
Collection Date		NA				
Extraction Date		NA				
Analysis Date		10/14/2018				
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	93
13C4-PFHpA	94
13C8-PFOA	106
13C9-PFNA	97
13C6-PFDA	106
13C7-PFUnA	94
13C2-PFDoA	99
13C2-PFTeDA	100
d3-MeFOSAA	87
d5-EtFOSAA	89
13C3-PFBS	90
13C3-PFHxS	93
13C8-PFOS	94

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

Client ID		180507-02: Ottawa Sand				
Battelle ID		CR894PB-FS				
Sample Type		PB				
Collection Date		10/02/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		0.00				
Matrix		SEDIMENT				
Sample Size		2.050				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	0.98	U	0.32	0.98	4.88
PFHpA	375-85-9	0.98	U	0.43	0.98	4.88
PFOA	335-67-1	0.98	U	0.49	0.98	4.88
PFNA	375-95-1	0.98	U	0.42	0.98	4.88
PFDA	335-76-2	0.98	U	0.26	0.98	4.88
PFUnA	2058-94-8	0.98	U	0.40	0.98	4.88
PFDoA	307-55-1	0.49	U	0.23	0.49	4.88
PFTrDA	72629-94-8	0.98	U	0.27	0.98	4.88
PFTeDA	376-06-7	1.95	U	0.61	1.95	4.88
NMeFOSAA	2355-31-9	2.44	U	1.09	2.44	4.88
NEtFOSAA	2991-50-6	1.95	U	0.56	1.95	4.88
PFBS	375-73-5	0.98	U	0.35	0.98	4.88
PFHxS	355-46-4	0.49	U	0.21	0.49	4.88
PFOS	1763-23-1	0.98	U	0.26	0.98	4.88

Surrogate Recoveries (%)

13C5-PFHxA	117
13C4-PFHpA	116
13C8-PFOA	117
13C9-PFNA	111
13C6-PFDA	126
13C7-PFUnA	127
13C2-PFDoA	120
13C2-PFTeDA	118
d3-MeFOSAA	95
d5-EtFOSAA	116
13C3-PFBS	105
13C3-PFHxS	101
13C8-PFOS	109

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

Client ID		180507-02: Ottawa Sand					
Battelle ID		CR895LCS-FS					
Sample Type		LCS					
Collection Date		10/02/2018					
Extraction Date		10/02/2018					
Analysis Date		10/14/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		0.00					
Matrix		SEDIMENT					
Sample Size		2.000					
Size Unit-Basis		g				Control Limits	
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	12.57	15.15	83		45	135
PFHpA	375-85-9	12.59	15.00	84		60	128
PFOA	335-67-1	12.73	15.00	85		56	136
PFNA	375-95-1	13.68	15.00	91		54	130
PFDA	335-76-2	13.60	15.00	91		55	141
PFUnA	2058-94-8	13.74	15.00	92		57	137
PFDoA	307-55-1	13.21	15.00	88		62	134
PFTrDA	72629-94-8	13.93	15.00	93		51	127
PFTeDA	376-06-7	13.83	15.00	92		34	162
NMeFOSAA	2355-31-9	16.28	15.00	109		52	146
NEtFOSAA	2991-50-6	14.33	15.00	96		54	124
PFBS	375-73-5	15.66	15.15	103		57	145
PFHxS	355-46-4	13.33	15.15	88		52	132
PFOS	1763-23-1	12.36	15.00	82		50	130
Surrogate Recoveries (%)							
13C5-PFHxA		129					
13C4-PFHpA		123					
13C8-PFOA		122					
13C9-PFNA		120					
13C6-PFDA		123					
13C7-PFUnA		121					
13C2-PFDoA		126					
13C2-PFTeDA		124					
d3-MeFOSAA		121					
d5-EtFOSAA		114					
13C3-PFBS		114					
13C3-PFHxS		131					
13C8-PFOS		134					

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

Client ID		VC-HS09-SB03-0506	VC-HS09-SB03-0506-MS					
Battelle ID		J8392-FS	J8393MS-FS					
Sample Type		SA	MS					
Collection Date		09/25/2018	09/25/2018					
Extraction Date		10/02/2018	10/02/2018					
Analysis Date		10/14/2018	10/14/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS	Sciex 5500 LC/MS/MS					
% Moisture		18.92	18.21					
Matrix		SB	SB					
Sample Size		1.660	1.640					
Size Unit-Basis		g	g				Control Limits	
Units		ng/g_Dry	ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	1.20 U	34.92	43.11	81		45	135
PFHpA	375-85-9	1.20 U	34.70	42.68	81		60	128
PFOA	335-67-1	1.20 U	33.93	42.68	79		56	136
PFNA	375-95-1	1.20 U	36.51	42.68	86		54	130
PFDA	335-76-2	1.20 U	35.84	42.68	84		55	141
PFUnA	2058-94-8	1.20 U	36.44	42.68	85		57	137
PFDoA	307-55-1	0.60 U	36.25	42.68	85		62	134
PFTrDA	72629-94-8	1.20 U	35.90	42.68	84		51	127
PFTeDA	376-06-7	2.41 U	37.08	42.68	87		34	162
NMeFOSAA	2355-31-9	3.01 U	41.54	42.68	97		52	146
NEtFOSAA	2991-50-6	2.41 U	33.81	42.68	79		54	124
PFBS	375-73-5	1.20 U	37.91	43.11	88		57	145
PFHxS	355-46-4	0.60 U	38.32	43.11	89		52	132
PFOS	1763-23-1	1.20 U	35.79	42.68	84		50	130
Surrogate Recoveries (%)								
13C5-PFHxA		109	115					
13C4-PFHpA		112	115					
13C8-PFOA		118	114					
13C9-PFNA		108	116					
13C6-PFDA		133	112					
13C7-PFUnA		129	120					
13C2-PFDoA		121	118					
13C2-PFTeDA		116	119					
d3-MeFOSAA		118	118					
d5-EtFOSAA		114	118					
13C3-PFBS		101	126					
13C3-PFHxS		112	116					
13C8-PFOS		110	129					

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

Client ID		VC-HS09-SB03-0506-MSD								
Battelle ID		J8394MSD-FS								
Sample Type		MSD								
Collection Date		09/25/2018								
Extraction Date		10/02/2018								
Analysis Date		10/14/2018								
Analytical Instrument		Sciex 5500 LC/MS/MS								
% Moisture		18.87								
Matrix		SB								
Sample Size		1.680								
Size Unit-Basis		g				Control Limits				RPD
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper	RPD	Qual	Limit
PFHxA	307-24-4	35.03	42.08	83		45	135	2.4		≤ 30
PFHpA	375-85-9	34.41	41.67	83		60	128	2.4		≤ 30
PFOA	335-67-1	37.52	41.67	90		56	136	13.0		≤ 30
PFNA	375-95-1	37.48	41.67	90		54	130	4.5		≤ 30
PFDA	335-76-2	36.16	41.67	87		55	141	3.5		≤ 30
PFUnA	2058-94-8	37.45	41.67	90		57	137	5.7		≤ 30
PFDoA	307-55-1	37.80	41.67	91		62	134	6.8		≤ 30
PFTrDA	72629-94-8	36.38	41.67	87		51	127	3.5		≤ 30
PFTeDA	376-06-7	37.48	41.67	90		34	162	3.4		≤ 30
NMeFOSAA	2355-31-9	46.18	41.67	111		52	146	13.5		≤ 30
NEtFOSAA	2991-50-6	34.95	41.67	84		54	124	6.1		≤ 30
PFBS	375-73-5	39.05	42.08	93		57	145	5.5		≤ 30
PFHxS	355-46-4	39.73	42.08	94		52	132	5.5		≤ 30
PFOS	1763-23-1	39.34	41.67	94		50	130	11.2		≤ 30

Surrogate Recoveries (%)

13C5-PFHxA	126
13C4-PFHpA	129
13C8-PFOA	118
13C9-PFNA	123
13C6-PFDA	120
13C7-PFUnA	123
13C2-PFDoA	123
13C2-PFTeDA	126
d3-MeFOSAA	94
d5-EtFOSAA	105
13C3-PFBS	110
13C3-PFHxS	101
13C8-PFOS	101

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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 18-0585

Package DP-18-0297

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 18-0585

Package DP-18-0297

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: Robert Lizotte, Jr. 2018.10.18 14:45:38 -04'00'

QC Chemist Approval: Digitally signed by devinec@battelle.org DN: cn=devinec@battelle.org Date: 2018.10.22 16:25:50 -04'00'

Project Manager Approval: Digitally signed by Jonathan Thorn Date: 2018.10.23 07:39:42 -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 18-0585

Package DP-18-0297

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.	39
3	***Miscellaneous Documentation*** Case Narrative, Miscellaneous Documentation Form, Quality Control Summary, Example Calculations, Internal Standard Recovery Report, Retention Time Window Report.	65
4	***Sample Preparation Records*** Sample Preparation Records, Dilution Worksheets, Standard Preparation Records, Certificates Of Analysis, GPC Check Report.	216
5	***Analytical Calibrations*** Analytical Sequence, Analytical Method, Tune Report, Initial Calibration, Pesticide Degradation Report, RF Summary, Calibration Verifications, Independent Calibration Verification Check.	247
6	***Analytical Data*** Raw Data Quantification Reports.	362
7	***Chromatograms*** Sample And Standard Chromatograms.	523
8	***Unused Data***	NA

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Signature Page

Battelle 2018 (1 of 2)
Signature Page

Name (Printed)	Signature	Initials	Date
Jonathan Thorn		JRT	4/4/2018
Robert Lizotte, Jr.		BL	4.4 2018
FRANCO PALA			4-4-2018
Carla Devine		CRD	4/4/18
Denise Schumitz		DMS	4/4/18
Candice Penn McCoy		CPM	4/4/2018
Rich Rostucci		RR	4/4/2018
Michael Mears			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		LMG	4.4.18

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Signature Page

Battelle 2018 (2 of 2)
Signature Page

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

Sample Summary

Client: CH2M
SDG: 18-0585
Project/Site: Naval Base Ventura County
CTO: 4164

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CR894PB-FS	180507-02: Ottawa Sand	SEDIMENT	10/2/2018	10/2/2018
CR895LCS-FS	180507-02: Ottawa Sand	SEDIMENT	10/2/2018	10/2/2018
J8381-FS	VC-PM64B-SB03-0506	SB	9/24/2018	9/27/2018
J8386-FS	VC-HS09-SB01-0102	SB	9/25/2018	9/27/2018
J8387-FS	VC-HS09-SB01-0506	SB	9/25/2018	9/27/2018
J8388-FS	VC-HS09-SB02-0102	SB	9/25/2018	9/27/2018
J8389-FS	VC-HS09-SB02-0506	SB	9/25/2018	9/27/2018
J8390-FS	VC-HS09-SS03-000H	SS	9/25/2018	9/27/2018
J8391-FS	VC-HS09-SB03-0102	SB	9/25/2018	9/27/2018
J8392-FS	VC-HS09-SB03-0506	SB	9/25/2018	9/27/2018
J8393MS-FS	VC-HS09-SB03-0506-MS	SB	9/25/2018	9/27/2018
J8394MSD-FS	VC-HS09-SB03-0506-MSD	SB	9/25/2018	9/27/2018
J8401-FS	VC-HS09-SS01-000H	SS	9/25/2018	9/27/2018
J8402-FS	VC-HS09-SS02-000H	SS	9/25/2018	9/27/2018
J8403-FS	VC-AOC16-SS01-000H	SS	9/25/2018	9/27/2018
J8404-FS	VC-AOC16-SB01-0102	SB	9/25/2018	9/27/2018
J8405-FS	VC-AOC16-SB01-0506	SB	9/25/2018	9/27/2018
J8406-FS	VC-AOC16-SS02-000H	SS	9/25/2018	9/27/2018
J8407-FS	VC-AOC16-SB02-0102	SB	9/25/2018	9/27/2018
J8408-FS	VC-AOC16-SB02-0506	SB	9/25/2018	9/27/2018
J8409-FS	VC-AOC16-SS03-000H	SS	9/25/2018	9/27/2018
J8410-FS	VC-AOC16-SB03-0102	SB	9/25/2018	9/27/2018
J8411-FS	VC-AOC16-SB03-0506	SB	9/25/2018	9/27/2018

Work Plan

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WORK/QUALITY ASSURANCE PROJECT PLAN

1.0 GENERAL PROJECT INFORMATION

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

2.0 SCOPE OF WORK

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

2.1 TECHNICAL APPROACH

2.1.1 Sample Receipt, Storage, and Handling

The list of samples for this project plan are presented in Attachment 1.

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

2.1.2 Sample Preparation

None

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

Batch quality control samples are defined in Table 1.

Target samples are presented in Attachment 1.

Table 1: Quality Control Samples

Type:	*Description:*	*Count:*	*Rgt:*	*Reference:*	*Comment:*
PB	Laboratory control reagent blank.	1 per batch	--	180507-02: Ottawa Sand Lot:1DJ0861	
LCS	Laboratory Control Sample	1 per batch	Yes	180507-02: Ottawa Sand Lot:1DJ0861	
MS	Spiked field sample for determining method accuracy in the presence of matrix.	1 per batch	--	NA	MS/MSD will be identified on the COC.
MSD	Spiked field sample for determining method accuracy and precision in the presence of matrix.	1 per batch	--	NA	MS/MSD will be identified on the COC.

2.1.3 Extraction/Preparation

2.1.3.1 Extraction

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

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

Sample Size: 2 g

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

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

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

Table 2: SIS and LCS/MS Spiking Level

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

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

2.1.3.2 Cleanup

None.

RIS spiking levels are presented in Table 3.

Extract PIV (uL): 1000

Table 3: RIS Spiking Level

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

2.1.4 Instrumental Analysis

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

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

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

Deviations: None

Comments: None

2.2. DELIVERABLES

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

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

3.0 QUALITY

The Method Quality Objectives are defined in Attachment 3.

4.0 ORGANIZATION AND COMMUNICATION

4.1 ORGANIZATION

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

Table 4: Project Team and Roles

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

4.2 COMMUNICATION

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

5.0 SCHEDULE

The project schedule is presented in Table 5.

Table 5. Schedule of Laboratory Activities

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

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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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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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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.

Sample Receipt Form

Approved: ☑ **Authorized** ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Thursday, September 27, 2018 10:30 AM

No. of Shipping Containers: 2

SHIPMENT

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

COC Forms: ☑ **Shipped with samples** ☐ **No Forms**

Cooler(s)/Box(es)

Cntr	Type	Tracking No.	Seal	Seal	Container	Therm.	Temp C	Smps
1 of 2	Cooler	782963465419	Custody Seals	Intact	Intact	Therm_1	0.2	17
2 of 2	Cooler	782963465420	Custody Seals	Intact	Intact	Therm_1	0.9	43

Samples

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

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

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

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

Samples Acidified: ☐ Yes ☐ No ☑ Unknown

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

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

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

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

Storage Location: Custody: Refrigerator - R0119 (NA) **BDO IDs Assigned:** J8352 - J8411

Samples logged in by: Schumitz, Matt **Date/Time:** 09/27/2018 10:30 AM

Approved By: Fitch, Ellyn **Approved On:** 10/8/2018 8:44:00 AM

Authorized By: **Authorized On:**

BATTELLE
It can be done

ShpNo: SHP-180927-02

Battelle Project No: 0110125-01

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ Approved: ☐

COC Client: CH2M

COC Project: NBVC Basewide SI

COC Date: 9/27/2018 8:37:0

BATTELLE
It can be done

ShpNo: SHP-180927-02

Battelle Project No: 0110125-01

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ Approved: ☐

	Description of Problem:	Explanation:
Client Id	Jars and C-O-C do not have matching Ids	VC-SO-FB05-092418 has 1 bottle that matches the COC and the 1 bottle labelled as VC-AQ-FB05-092418
	Jars and C-O-C do not have matching Ids	VC-SO-EB05-092418 has 1 bottle that matches that ID and the 1 bottle labelled as VC-AQ-EB05-092418
	Jars and C-O-C do not have matching Ids	VC-AQ-FB-092518 and VC-AQ-EB-092518 contain "06" after the FB and EB on the sample labels.
	Jars and C-O-C do not have matching Ids	The last COC has 6 samples that don't match from COC to sample labels. COC Label VC-AOC16-SB01-0918 VC-AOC16-SB01-0102 VC-AOC16-SB01-0918 VC-AOC16-SB01-0506 VC-AOC16-SB02-0918 VC-AOC16-SB02-0102 VC-AOC16-SB02-0918 VC-AOC16-SB02-0506 VC-AOC16-SB03-0918 VC-AOC16-SB03-0102 VC-AOC16-SB03-0918 VC-AOC16-SB03-0506
	Jars and C-O-C do not have matching Ids	Sample VC-PM324-SB03-0102-MSD does not have 0102 listed on the sample label.
	Jars and C-O-C do not have matching Ids	The EB and FB samples do not match COC to Bottle: COC VC-SO-FB05-092418 (J8368) VC-SO-EB05-092418 (J8369) VC-AQ-FB-092518 (J8398) VC-AQ-EB-092518 (J8399) Labels 1 bottle: VC-SO-FB05-092418, 1 bottle: VC-AQ-FB05-092418 (J8368) 1 bottle: VC-SO-EB05-092418, 1 bottle: VC-AQ-EB05-092418 (J8369) VC-SO-FB06-092518 (J8398) VC-SO-EB06-092518 (J8399)

Documentation of project manager notification

Sample Custodian	Schumitz, Matt	**Date:**	9/27/2018 2:24:00 PM
Laboratory Manager:	Thorn, Jonathan	**Date:**	10/5/2018 11:01:00 A
Project Manager:	Thorn, Jonathan	**Date:**	10/5/2018 11:01:00 A

BATTELLE
It can be done

ShpNo: SHP-180927-02

Battelle Project No: 0110125-01

Report Corrective Actions

Corrective Action No: 1 **of** 1

Authorized ☐ Approved: ☐

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

On 27-Sep-18 **I contacted** Hill, Tiffany **at** CH2M

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

Received clarification on all sample IDs from client. Email is included in the COC records.

Date this form was received back to the custodian: _____

Reference Number: _____

Fitch, Ellyn M

From: Schumitz, Matthew
Sent: Friday, October 05, 2018 7:31 AM
To: Thorn, Jonathan R
Cc: Fitch, Ellyn M
Subject: FW: SHP-180927-02 corrections

FYI

From: Hill, Tiffany/CVO <Tiffany.Hill@jacobs.com>
Sent: Thursday, October 04, 2018 4:54 PM
To: Schumitz, Matthew <SCHUMITZM@battelle.org>
Subject: RE: SHP-180927-02 corrections

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

Hi Matthew,

The way you have it logged in now is correct. Sorry about my typo on the date collected.

Thanks,

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

---

From: Schumitz, Matthew [mailto:SCHUMITZM@battelle.org]
Sent: Thursday, October 04, 2018 1:40 PM
To: Hill, Tiffany/CVO <Tiffany.Hill@jacobs.com>
Subject: [EXTERNAL] SHP-180927-02 corrections

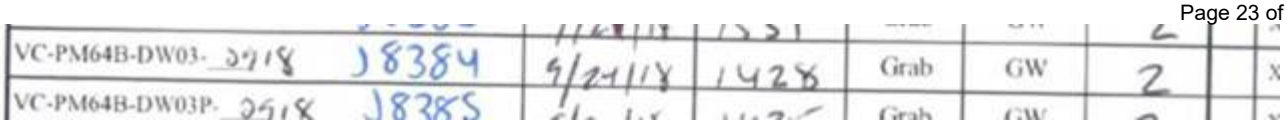
Hi Tiffany,

There has been some confusion with one of the corrections that you sent for us to make from the shipment we received on 9/27. See below I have snippets of your memo, the COC and our log in page.
The sample ID appears to correct across the board, but we do notice that the collection date is listed as 9/25/18 on your memo, should we change that to reflect that date?

If it would be easier we can have a quick chat or however you think is best to handle this.

Thanks

	Login	Correct Sample ID	Collected	Collected	SDG
J8384	VC-PM64B-DW02-0918	VC-PM64B-DW03-0918	9/25/18	14:28	SHP-180927-02



VC-PM64B-DW03-0918	J8384	9/24/18	1428	Grab	GW	2		X
VC-PM64B-DW03P-0918	J8385			Grab	GW			

J8384	VC-PM64B-DW03-0918	09/24/18 14:28

Matthew Schumitz

Technician - Sample Custodian
Analytical Chemistry Services
Office: 781.681.5588
schumitzm@battelle.org

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MEMORANDUM CH2MHILL

Corrections to COCs

TO: Jonathan Thorn, Battelle

COPIES: File
Laboratory Package SDG: SHP 180927-02

FROM: Tiffany Hill
Project Chemist

DATE: October 1, 2018

This memo is to document corrections made to entries on the Chains of Custody (COC) and Logins for NB Ventura County, CTO-4164.

The corrections include changes to the sample IDs on the COC and Login:

Battelle ID	Sample ID on Login	Correct Sample ID	Date Collected	Time Collected	SDG
J8384	VC-PM64B-DW02-0918	VC-PM64B-DW03-0918	9/25/18	14:28	SHP-180927-02
J8404	VC-AOC16-SB01-0918	VC-AOC16-SB01-0102	9/25/18	9:43	SHP-180927-02
J8405	VC-AOC16-SB01-0918	VC-AOC16-SB01-0506	9/25/18	9:57	SHP-180927-02
J8407	VC-AOC16-SB02-0918	VC-AOC16-SB02-0102	9/25/18	10:06	SHP-180927-02
J8408	VC-AOC16-SB02-0918	VC-AOC16-SB02-0506	9/25/18	10:10	SHP-180927-02
J8410	VC-AOC16-SB03-0918	VC-AOC16-SB03-0102	9/25/18	9:44	SHP-180927-02
J8411	VC-AOC16-SB03-0918	VC-AOC16-SB03-0506	9/25/18	9:53	SHP-180927-02

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It can be done

ShpNo SHP-180927-02

Battelle Project No:0110125-01

Sample Receipt Form Details

Approved: ☑ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Thursday, September 27, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8352	VC-PM323-SS01-000H	09/24/18 9:52	09/27/18 8:42	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8353	VC-PM323-SB01-0102	09/24/18 9:53	09/27/18 8:42	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8354	VC-PM323-SB01-0506	09/24/18 10:01	09/27/18 8:43	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8355	VC-PM323-SS03-000H	09/24/18 9:20	09/27/18 8:43	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8356	VC-PM323-SB03-0102	09/24/18 9:23	09/27/18 8:43	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8357	VC-PM323-SB03-0506	09/24/18 10:30	09/27/18 8:44	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8358	VC-PM323-DW01-0918	09/24/18 10:21	09/27/18 8:44	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8359	VC-PM323-DW03-0918	09/24/18 11:10	09/27/18 8:45	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8360	VC-PM324-SS01-000H	09/24/18 13:08	09/27/18 9:13	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8361	VC-PM324-SB01-0102	09/24/18 13:11	09/27/18 9:13	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8362	VC-PM324-SB01-0506	09/24/18 13:30	09/27/18 9:14	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8363	VC-PM324-SS03-000H	09/24/18 10:49	09/27/18 9:15	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8364	VC-PM324-SB03-0102	09/24/18 10:50	09/27/18 9:15	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8365	VC-PM324-SB03-0506	09/24/18 11:02	09/27/18 9:16	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8366	VC-PM324-SB03-0102-MS	09/24/18 10:50	09/27/18 9:16	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8367	VC-PM324-SB03-0102-MSD	09/24/18 10:50	09/27/18 9:17	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8368	VC-SO-FB05-092418	09/24/18 13:30	09/27/18 9:17	2	AQ	0.2	NA	NA	NA	R0119 (NA)			
J8369	VC-SO-EB05-092418	09/24/18 13:30	09/27/18 9:18	2	AQ	0.2	NA	NA	NA	R0119 (NA)			
J8370	VC-PM324-DW01-0918	09/24/18 13:45	09/27/18 9:19	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8371	VC-PM324-DW01P-0918	09/24/18 14:02	09/27/18 9:19	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8372	VC-PM324-DW03-0918	09/24/18 11:15	09/27/18 9:20	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8373	VC-PM64B-SS01-000H	09/24/18 14:34	09/27/18 9:21	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8374	VC-PM64B-SB01-0102	09/24/18 14:38	09/27/18 9:22	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8375	VC-PM64B-SB01-0506	09/24/18 14:50	09/27/18 9:22	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8376	VC-PM64B-SS02-000H	09/24/18 15:02	09/27/18 9:23	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8377	VC-PM64B-SB02-0102	09/24/18 15:03	09/27/18 9:23	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8378	VC-PM64B-SB02-0506	09/24/18 15:16	09/27/18 9:24	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8379	VC-PM64B-SS03-000H	09/24/18 13:52	09/27/18 9:24	1	SS	0.9	NA	NA	NA	R0119 (NA)			

BATTELLE
It can be done

ShpNo SHP-180927-02

Battelle Project No:0110125-01

Sample Receipt Form Details

Approved: ☑ Authorized ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Thursday, September 27, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8380	VC-PM64B-SB03-0102	09/24/18 13:53	09/27/18 9:24	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8381	VC-PM64B-SB03-0506	09/24/18 14:13	09/27/18 9:24	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8382	VC-PM64B-DW01-0918	09/24/18 15:00	09/27/18 9:25	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8383	VC-PM64B-DW02-0918	09/24/18 15:31	09/27/18 9:26	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8384	VC-PM64B-DW03-0918	09/24/18 14:28	09/27/18 9:26	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8385	VC-PM64B-DW03P-0918	09/24/18 14:35	09/27/18 9:26	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8386	VC-HS09-SB01-0102	09/25/18 13:21	09/27/18 9:27	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8387	VC-HS09-SB01-0506	09/25/18 14:04	09/27/18 9:28	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8388	VC-HS09-SB02-0102	09/25/18 14:39	09/27/18 9:28	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8389	VC-HS09-SB02-0506	09/25/18 14:47	09/27/18 9:29	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8390	VC-HS09-SS03-000H	09/25/18 12:54	09/27/18 9:29	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8391	VC-HS09-SB03-0102	09/25/18 12:55	09/27/18 9:29	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8392	VC-HS09-SB03-0506	09/25/18 13:05	09/27/18 9:30	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8393	VC-HS09-SB03-0506-MS	09/25/18 13:05	09/27/18 9:30	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8394	VC-HS09-SB03-0506-MSD	09/25/18 13:05	09/27/18 9:30	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8395	VC-HS09-DW01-0918	09/25/18 14:25	09/27/18 9:31	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8396	VC-HS09-DW02-0918	09/25/18 15:03	09/27/18 9:31	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8397	VC-HS09-DW03-0918	09/25/18 13:19	09/27/18 9:31	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8398	VC-AQ-FB-092518	09/25/18 14:35	09/27/18 9:32	2	AQ	0.2	NA	NA	NA	R0119 (NA)			
J8399	VC-AQ-EB-092518	09/25/18 14:30	09/27/18 9:32	2	AQ	0.2	NA	NA	NA	R0119 (NA)			
J8400	VC-HS09-DW03P-0918	09/25/18 13:56	09/27/18 9:33	2	GW	0.2	NA	NA	NA	R0119 (NA)			
J8401	VC-HS09-SS01-000H	09/25/18 13:20	09/27/18 9:33	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8402	VC-HS09-SS02-000H	09/25/18 14:35	09/27/18 9:34	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8403	VC-AOC16-SS01-000H	09/25/18 9:43	09/27/18 9:35	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8404	VC-AOC16-SB01-0102	09/25/18 9:43	09/27/18 9:35	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8405	VC-AOC16-SB01-0506	09/25/18 9:57	09/27/18 9:35	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8406	VC-AOC16-SS02-000H	09/25/18 10:05	09/27/18 9:36	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8407	VC-AOC16-SB02-0102	09/25/18 10:06	09/27/18 9:37	1	SB	0.9	NA	NA	NA	R0119 (NA)			

BATTELLE
It can be done

ShpNo SHP-180927-02

Battelle Project No: 0110125-01

Sample Receipt Form Details

Approved: ☑ **Authorized** ☐

Project Number: 695803 **Client:** CH2M

Received by: Schumitz, Matt **Date/Time Received:** Thursday, September 27, 2018 10:30 AM

No. of Shipping Containers: 2

BDO Id:	Client Sample ID:	Collection Date:	Login Date:	Ctrs:	Matrix:	Temp:	pH:	TRC:	VOC:	Stored In:	Loc:	No:	Comments:
J8408	VC-AOC16-SB02-0506	09/25/18 10:10	09/27/18 9:37	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8409	VC-AOC16-SS03-000H	09/25/18 9:43	09/27/18 9:37	1	SS	0.9	NA	NA	NA	R0119 (NA)			
J8410	VC-AOC16-SB03-0102	09/25/18 9:44	09/27/18 9:38	1	SB	0.9	NA	NA	NA	R0119 (NA)			
J8411	VC-AOC16-SB03-0506	09/25/18 9:53	09/27/18 9:38	1	SB	0.9	NA	NA	NA	R0119 (NA)			

Total Samples: 60

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM 323	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 #: 3
Project Name: NBVC Basewide SI Project No.: 675803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page#: 1 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod
VC-PM323-SS01-000H J8352	9/24/18	0952	Grab	SS	1	X
VC-PM323-SB01-0102 J8353	9/24/18	0953	Grab	SB	1	X
VC-PM323-SB01-0506 J8354	9/24/18	1001	Grab	SB	1	X
~~VC-PM323-SS02-000H~~			Grab	SS		X
~~VC-PM323-SB02-___~~			Grab	SB		X
~~VC-PM323-SB02-___~~			Grab	SB		X
VC-PM323-SS03-000H J8355	9/24/18	0920	Grab	SS	1	X
VC-PM323-SB03-0102 J8356	9/24/18	0923	Grab	SB	1	X
VC-PM323-SB03-0506 J8357	9/24/18	1030	Grab	SB	1	X
~~VC-PM323-S-___-___-MS~~			Grab			X
~~VC-PM323-S-___-___-SD~~			Grab			X
~~FDT-SO-FB-___-___~~			Grab	AQ		X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Victoria Kilbert	Jacobs	9/26/18 1400	[signature]	Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM 323	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-577-8628 Email: victoria.kilbert@jacobs.com Turnaround Time (TAT) Requested:		
Project Name: NBVC Basewide SI Project No.: 695803	Normal ☒ Priority ☐ RUSH ☐ Time Zone: PST		COC # 3 Page# 2 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod
VC-PM323-DW01-0918 J8358	9/24/18	1021	Grab	GW	2		X
~~VC-PM323-DW02~~			Grab	GW			X
~~VC-PM323-DW02P~~			Grab	GW			X
VC-PM323-DW03-0918 J8359	9/24/18	1110	Grab	GW	2		X
~~FDT-AQ-FB~~			Grab	AQ			X
~~FDT-AQ-EB~~			Grab	AQ			X

Vld

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	9/26/18 1400	MY	Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM324	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 ☒ Priority ☐ RUSH ☐ Time Zone: PST		COC # 3 Page# 3 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: PFAS by Method 537 Mod
VC-PM324-SS01-000H J8360	9/24/18	1308	Grab	SS	1		X
VC-PM324-SB01-0102 J8361	9/24/18	1311	Grab	SB	1		X
VC-PM324-SB01-0506 J8362	9/24/18	1330	Grab	SB	1		X
~~VC-PM324-SS02-000H~~			Grab	SS			X
~~VC-PM324-SB02-~~			Grab	SB			X
~~VC-PM324-SB02-~~			Grab	SB			X
VC-PM324-SS03-000H J8363	9/24/18	1049	Grab	SS	1		X
VC-PM324-SB03-0102 J8364	9/24/18	1050	Grab	SB	1		X
VC-PM324-SB03-0506 J8365	9/24/18	1102	Grab	SB	1		X
VC-PM324-SB03-0102-MS	9/24/18	1050	Grab	SB	1		X
VC-PM324-SB03-0102-MSD	9/24/18	1050	Grab	SB	1		X
~~EDT-SO-FB05~~ - 092418	9/24/18	1330	Grab	AQ	2		X

J8366 (VB)
J8367
J8368 VC

~~GW SCREEN~~

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	9/24/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM324	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 # 3
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 4 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod	
~~FDT~~-SO-EB-05-092418 J8369	9/24/18	1330	Grab	AQ	2	X	on GW screen

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	9/24/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM 324	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email: victoria.kilbert@jacobs.com Turnaround Time (TAT) Requested:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI Project No.: 695803	Normal X Priority ☐ RUSH ☐ Time Zone: PST	Analysis: PFAS by Method 537 Mod	Page# 5 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod
VC-PM324-DW01-0918 J8370	9/24/18	1345	Grab	GW	2	X
VC-PM324-DW01P-0918 J8371	9/24/18	1402	Grab	GW	2	X
~~VC-PM324-DW02~~			~~Grab~~	~~GW~~		X
VC-PM324-DW03-0918 J8372	9/24/18	1115	Grab	GW	2	X
~~FDT-AQ-FB~~			Grab	AQ		X
~~FDT-AQ-EB~~			~~Grab~~	~~AQ~~		X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	9/24/18 1400	M	Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM64B	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbat Phone: 724 977 3628 Email: victoria.kilbat@jacobs.com Turnaround Time (TAT) Requested:		
Project Name: NBVC Basewide SI	Normal ☒ Priority ☐ RUSH ☐		COC # 3
Project No.: 695803	Time Zone: PST		Page# 6 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: Preservative NA	Analysis: PFAS by Method 537 Mod
VC-PM64B-SS01-000H J8373	9/24/18	1434	Grab	SS	1		X
VC-PM64B-SB01-0102 J8374	9/24/18	1438	Grab	SB	1		X
VC-PM64B-SB01-0506 J8375	9/24/18	1450	Grab	SB	1		X
VC-PM64B-SS02-000H J8376	9/24/18	1502	Grab	SS	1		X
VC-PM64B-SB02-0102 J8377	9/24/18	1503	Grab	SB	1		X
VC-PM64B-SB02-0506 J8378	9/24/18	1516	Grab	SB	1		X
VC-PM64B-SS03-000H J8379	9/24/18	1352	Grab	SS	1		X
VC-PM64B-SB03-0102 J8380	9/24/18	1353	Grab	SB	1		X
VC-PM64B-SB03-0506 J8381	9/24/18	1413	Grab	SB	1		X
~~VC-PM64B-S MS~~			~~Grab~~				X
~~VC-PM64B-S SD~~			~~Grab~~				X
~~FDT-SO-FB~~			~~Grab~~	~~AQ~~			X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V Kilbat	Jacobs	9/26/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE
It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: PM64B	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: Email: 724.977-3628 Turnaround Time (TAT) Requested:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 7 of 10
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod
VC-PM64B-DW01-0918 J8382	9/24/18	1500	Grab	GW	2	X
VC-PM64B-DW02-0918 J8383	9/24/18	1531	Grab	GW	2	X
VC-PM64B-DW03-0918 J8384	9/24/18	1428	Grab	GW	2	X
VC-PM64B-DW03P-0918 J8385	9/24/18	1435	Grab	GW	2	X
~~FDT-AQ-EB~~			Grab	AQ		X
~~FDT-AQ-EB~~			Grab	AQ		X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	9/26/18 1700		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: HS09	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 8 of 10
Project No.: 695503	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: PFAS by Method 537 Mod
VC-HS09-SB01-0102 J8386	9/25/18	1321	Grab	SB	1	X
VC-HS09-SB01-0506 J8387	9/25/18	1404	Grab	SB	1	X
VC-HS09-SB02-0102 J8388	9/25/18	1439	Grab	SB	1	X
VC-HS09-SB02-0506 J8389	9/25/18	1447	Grab	SB	1	X
VC-HS09-SS03-0004 J8390	9/25/18	1254	Grab	SS	1	X
VC-HS09-SB03-0102 J8391	9/25/18	1255	Grab	SB	1	X
VC-HS09-SB03-0506 J8392	9/25/18	1305	Grab	SB	1	X
J8393 VC-HS09-SB03-0506-MS	9/25/18	1305	Grab	SB	1	X
J8394 VC-HS09-SB03-0506-MSD	9/25/18	1305	Grab	SB	1	X
~~FDT-SO-FB~~			~~Grab~~	~~AQ~~		~~X~~
~~FDT-SO-EB~~			~~Grab~~	~~AQ~~		~~X~~

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

Relinquished by (Print/Sign)	Company	Date/Time	Received by (Print/Sign)	Company	Date/Time
V. Kilbert	Jacobs	9/26/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

Client Contact Information	Project Manager: Eric Davis	Sampling Site: HS09	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbut Phone: 724-977-3628 Email:	Preservative: NA	COC #: 3
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested: Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page#: 9 of 10
Project No.: 695803	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod
~~VC-S09GW01-___~~			~~Grab~~	~~GW~~		X
~~VC-S09GW04-___~~			~~Grab~~	~~GW~~		X
~~VC-S09GW04P-___~~			~~Grab~~	~~GW~~		X
VC-HS09-DW01-0918 J8395	9/25/18	1425	Grab	GW	2	X
VC-HS09-DW02-0918 J8396	9/25/18	1503	Grab	GW	2	X
VC-HS09-DW03-0918 J8397	9/25/18	1319	Grab	GW	2	X
VC-~~FDT~~-AQ-FB___-092518 J8398	9/25/18	1435	Grab	AQ	2	X
VC-~~FDT~~-AQ-EB___-092518 J8399	9/25/18	~~1350~~ 1439	Grab	AQ	2	X
J8400 VC-HS09-DW03P-0918	9/25/18	1356	Grab	GW	2	X
J8401 VC-HS09-SS01-000H	9/25/18	1320	Grab	SS	1	X
J8402 VC-HS09-SS02-000H	9/25/18	1435	Grab	SS	1	X
			~~Grab~~			

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 Kilbut	J. cobs	9/26/18 1400	NM	Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:

BATTELLE It can be done

Chain-of-Custody

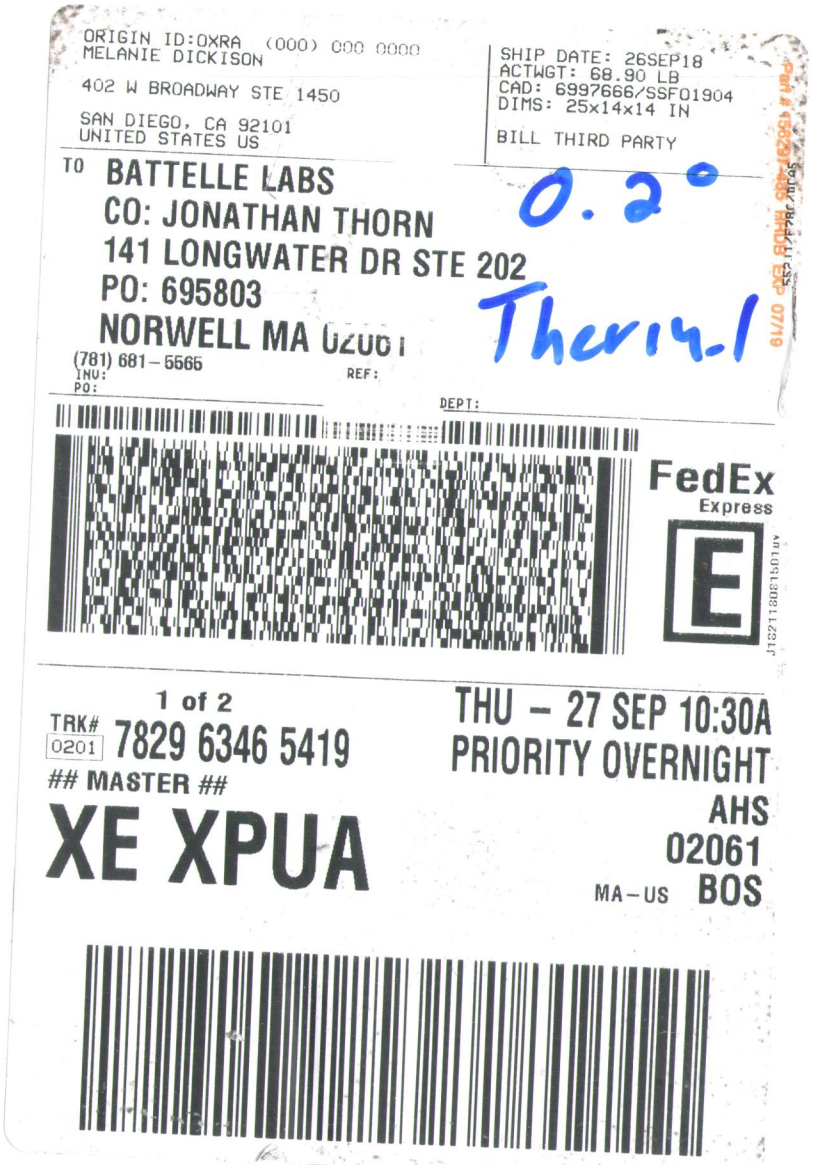
Client Contact Information	Project Manager: Eric Davis	Sampling Site: AOC 16	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Turnaround Time (TAT) Requested:		
Project No.: 695803	Normal [X] Priority [ ] RUSH [ ]	Analysis: PFAS by Method 537 Mod	Page# 10 of 10
	Time Zone: PST		

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	PFAS by Method 537 Mod
VC-AOC16-SS01-000H J8403	7/25/18	0943	Grab	SS	1	X
VC-AOC16-SB01-0918 J8404	7/25/18	0944	Grab	SB	1	X
VC-AOC16-SB01-0918 J8405	7/25/18	0957	Grab	SB	1	X
VC-AOC16-SS02-000H J8406	7/25/18	1005	Grab	SS	1	X
VC-AOC16-SB02-0918 J8407	7/25/18	1006	Grab	SB	1	X
VC-AOC16-SB02-0918 J8408	7/25/18	1010	Grab	SB	1	X
VC-AOC16-SS03-000H J8409	7/25/18	0943	Grab	SS	1	X
VC-AOC16-SB03-0918 J8410	7/25/18	0944	Grab	SB	1	X
VC-AOC16-SB03-0918 J8411	7/25/18	0953	Grab	SB	1	X
~~VC-AOC16-S - -MS~~			~~Grab~~			X
~~VC-AOC16-S - -SD~~			~~Grab~~			X
~~FDT-SO-EB~~			~~Grab~~	AQ		X

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

Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
V. Kilbert	Jacobs	7/26/18 1400		Battelle	9-27-18 1030
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:
Relinquished by (Print/Sign):	Company:	Date/Time:	Received by (Print/Sign):	Company:	Date/Time:

Comments:


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

SHIP DATE: 26SEP18
ACTWGT: 68.90 LB
CAD: 6997666/SSFO1904
DIMS: 25x14x14 IN
BILL THIRD PARTY

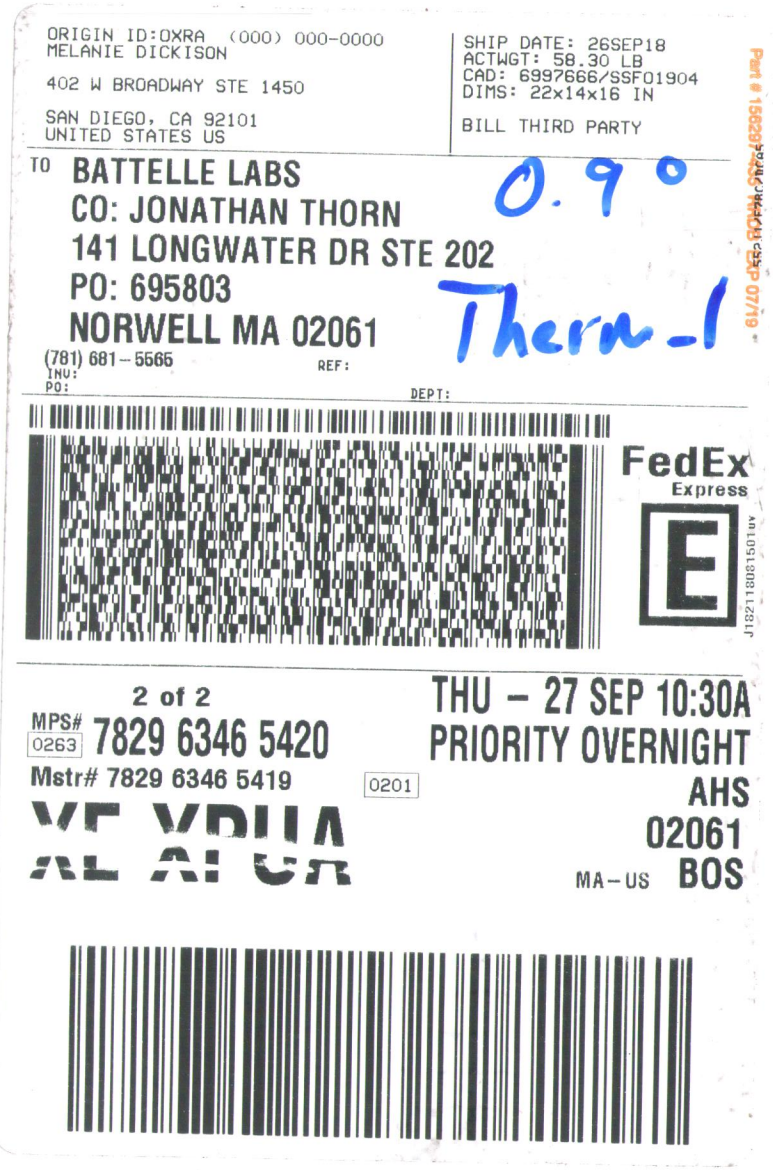
TO BATTELLE LABS
CO: JONATHAN THORN
141 LONGWATER DR STE 202
PO: 695803
NORWELL MA 02061
(781) 681-5565
INV:
PO:
REF:
DEPT:

0.2°
Therm_1

FedEx Express

1 of 2
TRK# 0201 7829 6346 5419
MASTER
XE XPUA

THU - 27 SEP 10:30A
PRIORITY OVERNIGHT
AHS
02061
MA-US BOS


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

SHIP DATE: 26SEP18
ACTWGT: 58.30 LB
CAD: 6997666/SSFO1904
DIMS: 22x14x16 IN
BILL THIRD PARTY

TO BATTELLE LABS
CO: JONATHAN THORN
141 LONGWATER DR STE 202
PO: 695803
NORWELL MA 02061
(781) 681-5565
INV:
PO:
REF:
DEPT:

0.9°
Therm_1

FedEx Express

2 of 2
MPS# 0263 7829 6346 5420
Mstr# 7829 6346 5419
0201
XE XPUA

THU - 27 SEP 10:30A
PRIORITY OVERNIGHT
AHS
02061
MA-US BOS

Data Tables

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

Client ID		VC-PM64B-SB03-0506				
Battelle ID		J8381-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		10.07				
Matrix		SB				
Sample Size		1.820				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.10	U	0.36	1.10	5.49
PFHpA	375-85-9	1.10	U	0.48	1.10	5.49
PFOA	335-67-1	1.10	U	0.55	1.10	5.49
PFNA	375-95-1	1.10	U	0.47	1.10	5.49
PFDA	335-76-2	1.10	U	0.30	1.10	5.49
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.49
PFDoA	307-55-1	0.55	U	0.26	0.55	5.49
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.49
PFTeDA	376-06-7	2.20	U	0.69	2.20	5.49
NMeFOSAA	2355-31-9	2.75	U	1.23	2.75	5.49
NEtFOSAA	2991-50-6	2.20	U	0.63	2.20	5.49
PFBS	375-73-5	1.10	U	0.40	1.10	5.49
PFHxS	355-46-4	1.37	J	0.24	0.55	5.49
PFOS	1763-23-1	3.22	J	0.30	1.10	5.49

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	120
13C8-PFOA	130
13C9-PFNA	125
13C6-PFDA	122
13C7-PFUnA	133
13C2-PFDoA	120
13C2-PFTeDA	125
d3-MeFOSAA	112
d5-EtFOSAA	119
13C3-PFBS	115
13C3-PFHxS	114
13C8-PFOS	104

BATTELLE
It can be done

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

Client ID		VC-HS09-SB01-0102				
Battelle ID		J8386-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		6.91				
Matrix		SB				
Sample Size		1.860				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.08	U	0.35	1.08	5.38
PFHpA	375-85-9	0.50	J	0.47	1.08	5.38
PFOA	335-67-1	3.61	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	3.74	J	0.24	0.54	5.38
PFOS	1763-23-1	19.21		0.29	1.08	5.38

Surrogate Recoveries (%)

13C5-PFHxA	119
13C4-PFHpA	121
13C8-PFOA	119
13C9-PFNA	109
13C6-PFDA	127
13C7-PFUnA	93
13C2-PFDoA	114
13C2-PFTeDA	126
d3-MeFOSAA	119
d5-EtFOSAA	80
13C3-PFBS	126
13C3-PFHxS	127
13C8-PFOS	113

BATTELLE
It can be done

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

Client ID		VC-HS09-SB01-0506			
Battelle ID		J8387-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		12.36			
Matrix		SB			
Sample Size		1.760			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.14 U	0.38	1.14	5.68
PFHpA	375-85-9	1.14 U	0.50	1.14	5.68
PFOA	335-67-1	0.65 J	0.57	1.14	5.68
PFNA	375-95-1	1.14 U	0.49	1.14	5.68
PFDA	335-76-2	1.14 U	0.31	1.14	5.68
PFUnA	2058-94-8	1.14 U	0.47	1.14	5.68
PFDoA	307-55-1	0.57 U	0.27	0.57	5.68
PFTrDA	72629-94-8	1.14 U	0.32	1.14	5.68
PFTeDA	376-06-7	2.27 U	0.72	2.27	5.68
NMeFOSAA	2355-31-9	2.84 U	1.27	2.84	5.68
NEtFOSAA	2991-50-6	2.27 U	0.65	2.27	5.68
PFBS	375-73-5	1.14 U	0.41	1.14	5.68
PFHxS	355-46-4	0.37 J	0.25	0.57	5.68
PFOS	1763-23-1	1.02 J	0.31	1.14	5.68

Surrogate Recoveries (%)

13C5-PFHxA	114
13C4-PFHpA	118
13C8-PFOA	122
13C9-PFNA	116
13C6-PFDA	118
13C7-PFUnA	117
13C2-PFDoA	117
13C2-PFTeDA	117
d3-MeFOSAA	115
d5-EtFOSAA	115
13C3-PFBS	131
13C3-PFHxS	113
13C8-PFOS	125

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

Client ID		VC-HS09-SB02-0102				
Battelle ID		J8388-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		7.28				
Matrix		SB				
Sample Size		1.910				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.05	U	0.35	1.05	5.24
PFHpA	375-85-9	1.05	U	0.46	1.05	5.24
PFOA	335-67-1	0.57	J	0.52	1.05	5.24
PFNA	375-95-1	1.05	U	0.45	1.05	5.24
PFDA	335-76-2	1.05	U	0.28	1.05	5.24
PFUnA	2058-94-8	1.05	U	0.43	1.05	5.24
PFDoA	307-55-1	0.52	U	0.25	0.52	5.24
PFTrDA	72629-94-8	1.05	U	0.29	1.05	5.24
PFTeDA	376-06-7	2.09	U	0.66	2.09	5.24
NMeFOSAA	2355-31-9	2.62	U	1.17	2.62	5.24
NEtFOSAA	2991-50-6	2.09	U	0.60	2.09	5.24
PFBS	375-73-5	1.05	U	0.38	1.05	5.24
PFHxS	355-46-4	0.52	U	0.23	0.52	5.24
PFOS	1763-23-1	1.05	U	0.28	1.05	5.24

Surrogate Recoveries (%)

13C5-PFHxA	127
13C4-PFHpA	122
13C8-PFOA	127
13C9-PFNA	115
13C6-PFDA	123
13C7-PFUnA	134
13C2-PFDoA	120
13C2-PFTeDA	119
d3-MeFOSAA	109
d5-EtFOSAA	107
13C3-PFBS	94
13C3-PFHxS	99
13C8-PFOS	112

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

Client ID		VC-HS09-SB02-0506				
Battelle ID		J8389-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		17.47				
Matrix		SB				
Sample Size		1.700				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.18	U	0.39	1.18	5.88
PFHpA	375-85-9	1.18	U	0.52	1.18	5.88
PFOA	335-67-1	0.66	J	0.59	1.18	5.88
PFNA	375-95-1	1.18	U	0.51	1.18	5.88
PFDA	335-76-2	1.18	U	0.32	1.18	5.88
PFUnA	2058-94-8	1.18	U	0.48	1.18	5.88
PFDoA	307-55-1	0.59	U	0.28	0.59	5.88
PFTrDA	72629-94-8	1.18	U	0.33	1.18	5.88
PFTeDA	376-06-7	2.35	U	0.74	2.35	5.88
NMeFOSAA	2355-31-9	2.94	U	1.32	2.94	5.88
NEtFOSAA	2991-50-6	2.35	U	0.67	2.35	5.88
PFBS	375-73-5	1.18	U	0.42	1.18	5.88
PFHxS	355-46-4	0.59	U	0.26	0.59	5.88
PFOS	1763-23-1	1.18	U	0.32	1.18	5.88

Surrogate Recoveries (%)

13C5-PFHxA	121
13C4-PFHpA	121
13C8-PFOA	127
13C9-PFNA	126
13C6-PFDA	129
13C7-PFUnA	134
13C2-PFDoA	120
13C2-PFTeDA	123
d3-MeFOSAA	115
d5-EtFOSAA	107
13C3-PFBS	114
13C3-PFHxS	118
13C8-PFOS	131

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

Client ID		VC-HS09-SS03-000H			
Battelle ID		J8390-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		12.32			
Matrix		SS			
Sample Size		1.780			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.12 U	0.37	1.12	5.62
PFHpA	375-85-9	1.12 U	0.49	1.12	5.62
PFOA	335-67-1	0.73 J	0.56	1.12	5.62
PFNA	375-95-1	1.12 U	0.48	1.12	5.62
PFDA	335-76-2	1.12 U	0.30	1.12	5.62
PFUnA	2058-94-8	1.12 U	0.46	1.12	5.62
PFDoA	307-55-1	0.56 U	0.27	0.56	5.62
PFTrDA	72629-94-8	1.12 U	0.31	1.12	5.62
PFTeDA	376-06-7	2.25 U	0.71	2.25	5.62
NMeFOSAA	2355-31-9	2.81 U	1.26	2.81	5.62
NEtFOSAA	2991-50-6	2.25 U	0.64	2.25	5.62
PFBS	375-73-5	1.12 U	0.40	1.12	5.62
PFHxS	355-46-4	0.56 U	0.25	0.56	5.62
PFOS	1763-23-1	1.44 J	0.30	1.12	5.62

Surrogate Recoveries (%)

13C5-PFHxA	128
13C4-PFHpA	121
13C8-PFOA	131
13C9-PFNA	131
13C6-PFDA	125
13C7-PFUnA	133
13C2-PFDoA	115
13C2-PFTeDA	122
d3-MeFOSAA	128
d5-EtFOSAA	139
13C3-PFBS	126
13C3-PFHxS	121
13C8-PFOS	124

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

Client ID		VC-HS09-SB03-0102				
Battelle ID		J8391-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		12.02				
Matrix		SB				
Sample Size		1.810				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.10	U	0.36	1.10	5.52
PFHpA	375-85-9	1.10	U	0.49	1.10	5.52
PFOA	335-67-1	1.10	U	0.55	1.10	5.52
PFNA	375-95-1	1.10	U	0.48	1.10	5.52
PFDA	335-76-2	1.10	U	0.30	1.10	5.52
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.52
PFDoA	307-55-1	0.55	U	0.27	0.55	5.52
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.52
PFTeDA	376-06-7	2.21	U	0.70	2.21	5.52
NMeFOSAA	2355-31-9	2.76	U	1.24	2.76	5.52
NEtFOSAA	2991-50-6	2.21	U	0.63	2.21	5.52
PFBS	375-73-5	1.10	U	0.40	1.10	5.52
PFHxS	355-46-4	0.55	U	0.24	0.55	5.52
PFOS	1763-23-1	0.53	J	0.30	1.10	5.52

Surrogate Recoveries (%)

13C5-PFHxA	125
13C4-PFHpA	136
13C8-PFOA	130
13C9-PFNA	140
13C6-PFDA	129
13C7-PFUnA	133
13C2-PFDoA	116
13C2-PFTeDA	126
d3-MeFOSAA	116
d5-EtFOSAA	134
13C3-PFBS	120
13C3-PFHxS	126
13C8-PFOS	133

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

Client ID		VC-HS09-SB03-0506			
Battelle ID		J8392-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		18.92			
Matrix		SB			
Sample Size		1.660			
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	109
13C4-PFHpA	112
13C8-PFOA	118
13C9-PFNA	108
13C6-PFDA	133
13C7-PFUnA	129
13C2-PFDoA	121
13C2-PFTeDA	116
d3-MeFOSAA	118
d5-EtFOSAA	114
13C3-PFBS	101
13C3-PFHxS	112
13C8-PFOS	110

BATTELLE
It can be done

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

Client ID		VC-HS09-SS01-000H				
Battelle ID		J8401-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		5.00				
Matrix		SS				
Sample Size		1.940				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.75	J	0.34	1.03	5.15
PFHpA	375-85-9	0.77	J	0.45	1.03	5.15
PFOA	335-67-1	2.78	J	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	0.42	J	0.37	1.03	5.15
PFHxS	355-46-4	7.22		0.23	0.52	5.15
PFOS	1763-23-1	22.48		0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	123
13C4-PFHpA	129
13C8-PFOA	121
13C9-PFNA	120
13C6-PFDA	126
13C7-PFUnA	123
13C2-PFDoA	116
13C2-PFTeDA	124
d3-MeFOSAA	98
d5-EtFOSAA	110
13C3-PFBS	116
13C3-PFHxS	117
13C8-PFOS	120

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

Client ID		VC-HS09-SS02-000H				
Battelle ID		J8402-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		8.80				
Matrix		SS				
Sample Size		1.830				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.09	U	0.36	1.09	5.46
PFHpA	375-85-9	1.09	U	0.48	1.09	5.46
PFOA	335-67-1	0.67	J	0.55	1.09	5.46
PFNA	375-95-1	1.09	U	0.47	1.09	5.46
PFDA	335-76-2	1.09	U	0.30	1.09	5.46
PFUnA	2058-94-8	1.09	U	0.45	1.09	5.46
PFDoA	307-55-1	0.55	U	0.26	0.55	5.46
PFTrDA	72629-94-8	1.09	U	0.31	1.09	5.46
PFTeDA	376-06-7	2.19	U	0.69	2.19	5.46
NMeFOSAA	2355-31-9	2.73	U	1.22	2.73	5.46
NEtFOSAA	2991-50-6	2.19	U	0.62	2.19	5.46
PFBS	375-73-5	1.09	U	0.39	1.09	5.46
PFHxS	355-46-4	0.55	U	0.24	0.55	5.46
PFOS	1763-23-1	0.62	J	0.30	1.09	5.46

Surrogate Recoveries (%)

13C5-PFHxA	122
13C4-PFHpA	123
13C8-PFOA	125
13C9-PFNA	118
13C6-PFDA	125
13C7-PFUnA	125
13C2-PFDoA	120
13C2-PFTeDA	115
d3-MeFOSAA	109
d5-EtFOSAA	100
13C3-PFBS	114
13C3-PFHxS	121
13C8-PFOS	120

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

Client ID		VC-AOC16-SS01-000H				
Battelle ID		J8403-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		10.38				
Matrix		SS				
Sample Size		1.850				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	3.23	J	0.36	1.08	5.41
PFHpA	375-85-9	3.02	J	0.48	1.08	5.41
PFOA	335-67-1	28.54		0.54	1.08	5.41
PFNA	375-95-1	1.67	J	0.46	1.08	5.41
PFDA	335-76-2	1.08	U	0.29	1.08	5.41
PFUnA	2058-94-8	1.08	U	0.44	1.08	5.41
PFDoA	307-55-1	0.54	U	0.26	0.54	5.41
PFTrDA	72629-94-8	1.08	U	0.30	1.08	5.41
PFTeDA	376-06-7	2.16	U	0.68	2.16	5.41
NMeFOSAA	2355-31-9	2.70	U	1.21	2.70	5.41
NEtFOSAA	2991-50-6	2.16	U	0.62	2.16	5.41
PFBS	375-73-5	1.08	U	0.39	1.08	5.41
PFHxS	355-46-4	51.28		0.24	0.54	5.41
PFOS	1763-23-1	619.80	D	2.92	10.81	54.05

Surrogate Recoveries (%)

13C5-PFHxA	128	
13C4-PFHpA	125	
13C8-PFOA	121	
13C9-PFNA	110	
13C6-PFDA	139	
13C7-PFUnA	147	
13C2-PFDoA	133	
13C2-PFTeDA	132	
d3-MeFOSAA	105	D
d5-EtFOSAA	126	D
13C3-PFBS	109	D
13C3-PFHxS	115	D
13C8-PFOS	143	

BATTELLE
It can be done

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

Client ID		VC-AOC16-SB01-0102				
Battelle ID		J8404-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		12.48				
Matrix		SB				
Sample Size		1.750				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	12.97		0.38	1.14	5.71
PFHpA	375-85-9	12.80		0.50	1.14	5.71
PFOA	335-67-1	127.82	D	1.43	2.86	14.29
PFNA	375-95-1	0.72	J	0.49	1.14	5.71
PFDA	335-76-2	1.14	U	0.31	1.14	5.71
PFUnA	2058-94-8	1.14	U	0.47	1.14	5.71
PFDoA	307-55-1	0.57	U	0.27	0.57	5.71
PFTrDA	72629-94-8	1.14	U	0.32	1.14	5.71
PFTeDA	376-06-7	2.29	U	0.72	2.29	5.71
NMeFOSAA	2355-31-9	2.86	U	1.28	2.86	5.71
NEtFOSAA	2991-50-6	2.29	U	0.65	2.29	5.71
PFBS	375-73-5	1.08	J	0.41	1.14	5.71
PFHxS	355-46-4	108.81	D	0.63	1.43	14.29
PFOS	1763-23-1	297.43	D	1.54	5.71	28.57

Surrogate Recoveries (%)

13C5-PFHxA	118
13C4-PFHpA	112
13C8-PFOA	106
13C9-PFNA	111
13C6-PFDA	117
13C7-PFUnA	119
13C2-PFDoA	114
13C2-PFTeDA	114
d3-MeFOSAA	105
d5-EtFOSAA	133
13C3-PFBS	134
13C3-PFHxS	125
13C8-PFOS	118

BATTELLE
It can be done

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

Client ID		VC-AOC16-SB01-0506				
Battelle ID		J8405-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		21.18				
Matrix		SB				
Sample Size		1.580				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	15.71		0.42	1.27	6.33
PFHpA	375-85-9	1.92	J	0.56	1.27	6.33
PFOA	335-67-1	1.45	J	0.63	1.27	6.33
PFNA	375-95-1	1.27	U	0.54	1.27	6.33
PFDA	335-76-2	1.27	U	0.34	1.27	6.33
PFUnA	2058-94-8	1.27	U	0.52	1.27	6.33
PFDoA	307-55-1	0.63	U	0.30	0.63	6.33
PFTrDA	72629-94-8	1.27	U	0.35	1.27	6.33
PFTeDA	376-06-7	2.53	U	0.80	2.53	6.33
NMeFOSAA	2355-31-9	3.16	U	1.42	3.16	6.33
NEtFOSAA	2991-50-6	2.53	U	0.72	2.53	6.33
PFBS	375-73-5	4.53	J	0.46	1.27	6.33
PFHxS	355-46-4	1.86	J	0.28	0.63	6.33
PFOS	1763-23-1	3.72	J	0.34	1.27	6.33

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	114
13C8-PFOA	120
13C9-PFNA	123
13C6-PFDA	143
13C7-PFUnA	145
13C2-PFDoA	129
13C2-PFTeDA	125
d3-MeFOSAA	129
d5-EtFOSAA	141
13C3-PFBS	122
13C3-PFHxS	123
13C8-PFOS	135

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

Client ID		VC-AOC16-SS02-000H			
Battelle ID		J8406-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		10.10			
Matrix		SS			
Sample Size		1.800			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	9.87	0.37	1.11	5.56
PFHpA	375-85-9	1.89 J	0.49	1.11	5.56
PFOA	335-67-1	6.02	0.56	1.11	5.56
PFNA	375-95-1	0.71 J	0.48	1.11	5.56
PFDA	335-76-2	1.11 U	0.30	1.11	5.56
PFUnA	2058-94-8	1.11 U	0.46	1.11	5.56
PFDoA	307-55-1	0.56 U	0.27	0.56	5.56
PFTrDA	72629-94-8	1.11 U	0.31	1.11	5.56
PFTeDA	376-06-7	2.22 U	0.70	2.22	5.56
NMeFOSAA	2355-31-9	2.78 U	1.24	2.78	5.56
NEtFOSAA	2991-50-6	2.22 U	0.63	2.22	5.56
PFBS	375-73-5	0.82 J	0.40	1.11	5.56
PFHxS	355-46-4	52.67	0.24	0.56	5.56
PFOS	1763-23-1	1365.15 D	5.00	18.52	92.59

Surrogate Recoveries (%)

13C5-PFHxA	131
13C4-PFHpA	123
13C8-PFOA	114
13C9-PFNA	95
13C6-PFDA	130
13C7-PFUnA	129
13C2-PFDoA	114
13C2-PFTeDA	116
d3-MeFOSAA	103 D
d5-EtFOSAA	132 D
13C3-PFBS	97 D
13C3-PFHxS	97 D
13C8-PFOS	147

BATTELLE
It can be done

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

Client ID		VC-AOC16-SB02-0102				
Battelle ID		J8407-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		9.75				
Matrix		SB				
Sample Size		1.830				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	14.94		0.36	1.09	5.46
PFHpA	375-85-9	4.68	J	0.48	1.09	5.46
PFOA	335-67-1	33.53		0.55	1.09	5.46
PFNA	375-95-1	1.30	J	0.47	1.09	5.46
PFDA	335-76-2	1.09	U	0.30	1.09	5.46
PFUnA	2058-94-8	1.09	U	0.45	1.09	5.46
PFDoA	307-55-1	0.55	U	0.26	0.55	5.46
PFTrDA	72629-94-8	1.09	U	0.31	1.09	5.46
PFTeDA	376-06-7	2.19	U	0.69	2.19	5.46
NMeFOSAA	2355-31-9	2.73	U	1.22	2.73	5.46
NEtFOSAA	2991-50-6	2.19	U	0.62	2.19	5.46
PFBS	375-73-5	1.39	J	0.39	1.09	5.46
PFHxS	355-46-4	117.52	D	0.48	1.09	10.93
PFOS	1763-23-1	834.11	D	3.69	13.66	68.31

Surrogate Recoveries (%)

13C5-PFHxA	127	
13C4-PFHpA	127	
13C8-PFOA	113	
13C9-PFNA	110	
13C6-PFDA	133	
13C7-PFUnA	124	
13C2-PFDoA	123	
13C2-PFTeDA	120	
d3-MeFOSAA	126	D
d5-EtFOSAA	128	D
13C3-PFBS	122	D
13C3-PFHxS	135	D
13C8-PFOS	136	

BATTELLE
It can be done

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

Client ID		VC-AOC16-SB02-0506			
Battelle ID		J8408-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		19.28			
Matrix		SB			
Sample Size		1.630			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	38.14	0.40	1.23	6.13
PFHpA	375-85-9	3.15 J	0.54	1.23	6.13
PFOA	335-67-1	1.16 J	0.61	1.23	6.13
PFNA	375-95-1	1.23 U	0.53	1.23	6.13
PFDA	335-76-2	1.23 U	0.33	1.23	6.13
PFUnA	2058-94-8	1.23 U	0.50	1.23	6.13
PFDoA	307-55-1	0.61 U	0.29	0.61	6.13
PFTrDA	72629-94-8	1.23 U	0.34	1.23	6.13
PFTeDA	376-06-7	2.45 U	0.77	2.45	6.13
NMeFOSAA	2355-31-9	3.07 U	1.37	3.07	6.13
NEtFOSAA	2991-50-6	2.45 U	0.70	2.45	6.13
PFBS	375-73-5	9.69	0.44	1.23	6.13
PFHxS	355-46-4	9.40	0.27	0.61	6.13
PFOS	1763-23-1	20.63	0.33	1.23	6.13

Surrogate Recoveries (%)

13C5-PFHxA	115
13C4-PFHpA	115
13C8-PFOA	116
13C9-PFNA	116
13C6-PFDA	116
13C7-PFUnA	133
13C2-PFDoA	114
13C2-PFTeDA	114
d3-MeFOSAA	105
d5-EtFOSAA	113
13C3-PFBS	116
13C3-PFHxS	106
13C8-PFOS	119

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

Client ID		VC-AOC16-SS03-000H				
Battelle ID		J8409-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		9.77				
Matrix		SS				
Sample Size		1.810				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	6.47		0.36	1.10	5.52
PFHpA	375-85-9	1.95	J	0.49	1.10	5.52
PFOA	335-67-1	6.32		0.55	1.10	5.52
PFNA	375-95-1	0.59	J	0.48	1.10	5.52
PFDA	335-76-2	0.81	J	0.30	1.10	5.52
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.52
PFDoA	307-55-1	0.55	U	0.27	0.55	5.52
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.52
PFTeDA	376-06-7	2.21	U	0.70	2.21	5.52
NMeFOSAA	2355-31-9	2.76	U	1.24	2.76	5.52
NEtFOSAA	2991-50-6	2.21	U	0.63	2.21	5.52
PFBS	375-73-5	0.54	J	0.40	1.10	5.52
PFHxS	355-46-4	56.63		0.24	0.55	5.52
PFOS	1763-23-1	941.73	D	3.73	13.81	69.06

Surrogate Recoveries (%)

13C5-PFHxA	134	
13C4-PFHpA	130	
13C8-PFOA	126	
13C9-PFNA	106	
13C6-PFDA	121	
13C7-PFUnA	124	
13C2-PFDoA	124	
13C2-PFTeDA	117	
d3-MeFOSAA	116	D
d5-EtFOSAA	127	D
13C3-PFBS	105	D
13C3-PFHxS	105	D
13C8-PFOS	118	

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

Client ID		VC-AOC16-SB03-0102				
Battelle ID		J8410-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		11.65				
Matrix		SB				
Sample Size		1.820				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	7.09		0.36	1.10	5.49
PFHpA	375-85-9	1.86	J	0.48	1.10	5.49
PFOA	335-67-1	5.22	J	0.55	1.10	5.49
PFNA	375-95-1	1.10	U	0.47	1.10	5.49
PFDA	335-76-2	1.10	U	0.30	1.10	5.49
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.49
PFDoA	307-55-1	0.55	U	0.26	0.55	5.49
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.49
PFTeDA	376-06-7	2.20	U	0.69	2.20	5.49
NMeFOSAA	2355-31-9	2.75	U	1.23	2.75	5.49
NEtFOSAA	2991-50-6	2.20	U	0.63	2.20	5.49
PFBS	375-73-5	1.10	U	0.40	1.10	5.49
PFHxS	355-46-4	26.66		0.24	0.55	5.49
PFOS	1763-23-1	651.49	D	3.71	13.74	68.68

Surrogate Recoveries (%)

13C5-PFHxA	119	
13C4-PFHpA	112	
13C8-PFOA	122	
13C9-PFNA	102	
13C6-PFDA	127	
13C7-PFUnA	129	
13C2-PFDoA	111	
13C2-PFTeDA	110	
d3-MeFOSAA	112	D
d5-EtFOSAA	110	D
13C3-PFBS	99	D
13C3-PFHxS	109	D
13C8-PFOS	121	

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

Client ID		VC-AOC16-SB03-0506			
Battelle ID		J8411-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		19.60			
Matrix		SB			
Sample Size		1.640			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	14.21	0.40	1.22	6.10
PFHpA	375-85-9	2.77 J	0.54	1.22	6.10
PFOA	335-67-1	44.68	0.61	1.22	6.10
PFNA	375-95-1	1.22 U	0.52	1.22	6.10
PFDA	335-76-2	1.22 U	0.33	1.22	6.10
PFUnA	2058-94-8	1.22 U	0.50	1.22	6.10
PFDoA	307-55-1	0.61 U	0.29	0.61	6.10
PFTrDA	72629-94-8	1.22 U	0.34	1.22	6.10
PFTeDA	376-06-7	2.44 U	0.77	2.44	6.10
NMeFOSAA	2355-31-9	3.05 U	1.37	3.05	6.10
NEtFOSAA	2991-50-6	2.44 U	0.70	2.44	6.10
PFBS	375-73-5	3.54 J	0.44	1.22	6.10
PFHxS	355-46-4	8.55	0.27	0.61	6.10
PFOS	1763-23-1	0.90 J	0.33	1.22	6.10

Surrogate Recoveries (%)

13C5-PFHxA	109
13C4-PFHpA	104
13C8-PFOA	105
13C9-PFNA	109
13C6-PFDA	116
13C7-PFUnA	122
13C2-PFDoA	110
13C2-PFTeDA	108
d3-MeFOSAA	93
d5-EtFOSAA	106
13C3-PFBS	116
13C3-PFHxS	120
13C8-PFOS	121

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

Client ID		KB80 IB				
Battelle ID		KB80 IB_10/14/2018				
Sample Type		IB				
Collection Date		NA				
Extraction Date		NA				
Analysis Date		10/14/2018				
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	93
13C4-PFHpA	94
13C8-PFOA	106
13C9-PFNA	97
13C6-PFDA	106
13C7-PFUnA	94
13C2-PFDoA	99
13C2-PFTeDA	100
d3-MeFOSAA	87
d5-EtFOSAA	89
13C3-PFBS	90
13C3-PFHxS	93
13C8-PFOS	94

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

Client ID		180507-02: Ottawa Sand			
Battelle ID		CR894PB-FS			
Sample Type		PB			
Collection Date		10/02/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		0.00			
Matrix		SEDIMENT			
Sample Size		2.050			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.98 U	0.32	0.98	4.88
PFHpA	375-85-9	0.98 U	0.43	0.98	4.88
PFOA	335-67-1	0.98 U	0.49	0.98	4.88
PFNA	375-95-1	0.98 U	0.42	0.98	4.88
PFDA	335-76-2	0.98 U	0.26	0.98	4.88
PFUnA	2058-94-8	0.98 U	0.40	0.98	4.88
PFDoA	307-55-1	0.49 U	0.23	0.49	4.88
PFTrDA	72629-94-8	0.98 U	0.27	0.98	4.88
PFTeDA	376-06-7	1.95 U	0.61	1.95	4.88
NMeFOSAA	2355-31-9	2.44 U	1.09	2.44	4.88
NEtFOSAA	2991-50-6	1.95 U	0.56	1.95	4.88
PFBS	375-73-5	0.98 U	0.35	0.98	4.88
PFHxS	355-46-4	0.49 U	0.21	0.49	4.88
PFOS	1763-23-1	0.98 U	0.26	0.98	4.88

Surrogate Recoveries (%)

13C5-PFHxA	117
13C4-PFHpA	116
13C8-PFOA	117
13C9-PFNA	111
13C6-PFDA	126
13C7-PFUnA	127
13C2-PFDoA	120
13C2-PFTeDA	118
d3-MeFOSAA	95
d5-EtFOSAA	116
13C3-PFBS	105
13C3-PFHxS	101
13C8-PFOS	109

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

Client ID		180507-02: Ottawa Sand					
Battelle ID		CR895LCS-FS					
Sample Type		LCS					
Collection Date		10/02/2018					
Extraction Date		10/02/2018					
Analysis Date		10/14/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		0.00					
Matrix		SEDIMENT					
Sample Size		2.000					
Size Unit-Basis		g				Control Limits	
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	12.57	15.15	83		45	135
PFHpA	375-85-9	12.59	15.00	84		60	128
PFOA	335-67-1	12.73	15.00	85		56	136
PFNA	375-95-1	13.68	15.00	91		54	130
PFDA	335-76-2	13.60	15.00	91		55	141
PFUnA	2058-94-8	13.74	15.00	92		57	137
PFDoA	307-55-1	13.21	15.00	88		62	134
PFTrDA	72629-94-8	13.93	15.00	93		51	127
PFTeDA	376-06-7	13.83	15.00	92		34	162
NMeFOSAA	2355-31-9	16.28	15.00	109		52	146
NEtFOSAA	2991-50-6	14.33	15.00	96		54	124
PFBS	375-73-5	15.66	15.15	103		57	145
PFHxS	355-46-4	13.33	15.15	88		52	132
PFOS	1763-23-1	12.36	15.00	82		50	130

Surrogate Recoveries (%)

13C5-PFHxA	129
13C4-PFHpA	123
13C8-PFOA	122
13C9-PFNA	120
13C6-PFDA	123
13C7-PFUnA	121
13C2-PFDoA	126
13C2-PFTeDA	124
d3-MeFOSAA	121
d5-EtFOSAA	114
13C3-PFBS	114
13C3-PFHxS	131
13C8-PFOS	134

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

Client ID		VC-HS09-SB03-0506	VC-HS09-SB03-0506-MS					
Battelle ID		J8392-FS	J8393MS-FS					
Sample Type		SA	MS					
Collection Date		09/25/2018	09/25/2018					
Extraction Date		10/02/2018	10/02/2018					
Analysis Date		10/14/2018	10/14/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS	Sciex 5500 LC/MS/MS					
% Moisture		18.92	18.21					
Matrix		SB	SB					
Sample Size		1.660	1.640					
Size Unit-Basis		g	g				Control Limits	
Units		ng/g_Dry	ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	1.20 U	34.92	43.11	81		45	135
PFHpA	375-85-9	1.20 U	34.70	42.68	81		60	128
PFOA	335-67-1	1.20 U	33.93	42.68	79		56	136
PFNA	375-95-1	1.20 U	36.51	42.68	86		54	130
PFDA	335-76-2	1.20 U	35.84	42.68	84		55	141
PFUnA	2058-94-8	1.20 U	36.44	42.68	85		57	137
PFDoA	307-55-1	0.60 U	36.25	42.68	85		62	134
PFTrDA	72629-94-8	1.20 U	35.90	42.68	84		51	127
PFTeDA	376-06-7	2.41 U	37.08	42.68	87		34	162
NMeFOSAA	2355-31-9	3.01 U	41.54	42.68	97		52	146
NEtFOSAA	2991-50-6	2.41 U	33.81	42.68	79		54	124
PFBS	375-73-5	1.20 U	37.91	43.11	88		57	145
PFHxS	355-46-4	0.60 U	38.32	43.11	89		52	132
PFOS	1763-23-1	1.20 U	35.79	42.68	84		50	130
Surrogate Recoveries (%)								
13C5-PFHxA		109	115					
13C4-PFHpA		112	115					
13C8-PFOA		118	114					
13C9-PFNA		108	116					
13C6-PFDA		133	112					
13C7-PFUnA		129	120					
13C2-PFDoA		121	118					
13C2-PFTeDA		116	119					
d3-MeFOSAA		118	118					
d5-EtFOSAA		114	118					
13C3-PFBS		101	126					
13C3-PFHxS		112	116					
13C8-PFOS		110	129					

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

Client ID		VC-HS09-SB03-0506-MSD								
Battelle ID		J8394MSD-FS								
Sample Type		MSD								
Collection Date		09/25/2018								
Extraction Date		10/02/2018								
Analysis Date		10/14/2018								
Analytical Instrument		Sciex 5500 LC/MS/MS								
% Moisture		18.87								
Matrix		SB								
Sample Size		1.680								
Size Unit-Basis		g				Control Limits				RPD
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper	RPD	Qual	Limit
PFHxA	307-24-4	35.03	42.08	83		45	135	2.4		≤ 30
PFHpA	375-85-9	34.41	41.67	83		60	128	2.4		≤ 30
PFOA	335-67-1	37.52	41.67	90		56	136	13.0		≤ 30
PFNA	375-95-1	37.48	41.67	90		54	130	4.5		≤ 30
PFDA	335-76-2	36.16	41.67	87		55	141	3.5		≤ 30
PFUnA	2058-94-8	37.45	41.67	90		57	137	5.7		≤ 30
PFDoA	307-55-1	37.80	41.67	91		62	134	6.8		≤ 30
PFTrDA	72629-94-8	36.38	41.67	87		51	127	3.5		≤ 30
PFTeDA	376-06-7	37.48	41.67	90		34	162	3.4		≤ 30
NMeFOSAA	2355-31-9	46.18	41.67	111		52	146	13.5		≤ 30
NEtFOSAA	2991-50-6	34.95	41.67	84		54	124	6.1		≤ 30
PFBS	375-73-5	39.05	42.08	93		57	145	5.5		≤ 30
PFHxS	355-46-4	39.73	42.08	94		52	132	5.5		≤ 30
PFOS	1763-23-1	39.34	41.67	94		50	130	11.2		≤ 30

Surrogate Recoveries (%)

13C5-PFHxA	126
13C4-PFHpA	129
13C8-PFOA	118
13C9-PFNA	123
13C6-PFDA	120
13C7-PFUnA	123
13C2-PFDoA	123
13C2-PFTeDA	126
d3-MeFOSAA	94
d5-EtFOSAA	105
13C3-PFBS	110
13C3-PFHxS	101
13C8-PFOS	101

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 18-0585

Project:	CTO-4164 Naval Base Ventura County, California
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SS, SB
Data Set:	DP-18-0297
Analytical SOP:	5-369
Method Reference:	PFAS to QSM 5.1 Table B-15

Sample Custody		
Collection Date	Receipt Date	Temp (°C)
9/24-25/2018	9/27/2018	0.2 and 0.9
Corrective Actions	Minor discrepancies between the COC and the sample containers were corrected by the Project Chemist, email clarifying IDs is included with the sample custody records.	
Sample Storage	The samples were stored refrigerated until extraction.	
Related samples	NA	

	METHOD SUMMARIES
Sample Preparation	Solid samples were aliquoted into extraction tubes and spiked with surrogates prior to the addition of solvent. The sediment was serially extracted on the Geno/Grinder with 0.4% NH_3 in methanol. 1 mL of extract was refined using ENVI-carb SPE cartridges. Extracts were concentrated to dryness under nitrogen with a water bath set between 35 °C and 45 °C, reconstituted with 80:20 methanol/water (V/V) and fortified with internal standard. Extracts were transferred for LC-MS/MS analysis.
Prep comments	All samples were pre-screened prior to extraction to check potential levels of PFAS in the samples.
Analysis	PFAS were measured by liquid chromatography tandem mass spectrometry (LC-MS/MS) in the multiple reaction monitoring (MRM). An initial calibration consisting of representative target analytes, labelled analogs, and internal standards was analyzed prior to analysis to demonstrate the linear range of analysis. Calibration verification was performed at the beginning and end of 10 injections and at the end of each sequence. Target PFAS were quantified using the isotope dilution method. Samples are reported in ng/g concentrations.
Analysis Comments	Samples analyzed on Sciex 5500 LC-MS/MS. In cases were native PFAS compounds were reported from dilutions (above calibration in non-diluted extracts), the extracted internal standard (surrogate) used to quantify the native compound was also reported from the dilution. Where detected in samples, PFOS is a mixture of linear and branched isomers

Holding Times	Extraction Date(s)	Analysis Date(s)
	10/2/2018	10/14/2018

QA/QC Summary
Batch 18-0585

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

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

Matrix Spike and Matrix Spike Duplicate (MS/MSD)	A MS/MSD was prepared with this analytical batch. The percent recoveries of target analytes were calculated to measure accuracy.
Laboratory derived control limits for recovery and <30% RPD	No exceedances noted.
	No comments.

Extracted Internal Standard Analytes	Labelled analog compounds were added prior to extraction. The recoveries are calculated to measure extraction efficiency.
50-150% of true value	No exceedances noted.
	No comments.

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

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

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

QA/QC Summary
Batch 18-0585

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: 18-0585
Data Set: DP-18-0297
Test Code: Master_369

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

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BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

Project Title:	CTO-4164 Naval Base Ventura County,	**Data Set Number:**	DP-18-0297
Project Number:	100110125-01	**Prep Batch Number:**	18-0585
Entered By:	Robert Lizotte Jr	**Entered On:**	10/17/2018
Test Code (Matrix Type):	Master_369(S)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE). The data were integrated by D.Schumitz and the package was prepared by R.Lizotte
-BL 10/17/0218

The following samples had the labelled surrogates reported from the dilution rather than the orginal extract:
VC-AOC16-SS01-000H (J8403)
VC-AOC16-SS02-000H (J8406)
VC-AOC16-SB02-0102 (J8407)
VC-AOC16-SS03-000H (J8409)
VC-AOC16-SB03-0102 (J8410)
-BL 10/17/0218

Task Leader Approval:

SupervisorApproval:

PM Approval:

Digitally signed by Jonathan Thorn
Date: 2018.10.18 15:44:07 -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:	J8401-FS(3)
Client Sample ID:	VC-HS09-SS01-000H
Sample Size:	1.94
Units:	g
Dilution Factor:	10.000
PIV (L):	0.001
Target Analyte:	PFHxS
MRM Transition:	399.0 / 80.0
Data file:	18-0585_18-0583.wiff
Result table:	18-0585_18-0583_BASE
Area:	691,986.32
IS Name:	13C3-PFHxS
IS Area:	33,801.64
IS Amount (ng/L):	236.5
y-intercept:	0.22767
slope:	3.41837

$$\text{Concentration} = \frac{[(691986.32/33801.64) - 0.22767]}{3.41837} * 236.5 * 0.001 * 10 / 1.94$$

ng/g = 7.22

*Final concentration may vary based on rounding.

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Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batch: 18-0585
Data Set: DP-18-0297

		CR894PB-FS (180507-02: Ottawa Sand)	CR895LCS-FS (180507-02: Ottawa Sand)	J8393MS-FS (VC-HS09-SB03-0506-MS)	J8394MSD-FS (VC-HS09-SB03-0506-MSD)	J8381-FS (VC-PM64B-SB03-0506)	J8386-FS (VC-HS09-SB01-0102)	J8387-FS (VC-HS09-SB01-0506)	J8388-FS (VC-HS09-SB02-0102)
PFHxA	307-24-4	-	L	L	L	-	-	-	-
PFHpA	375-85-9	-	L	L	L	-	L	-	-
PFOA	335-67-1	-	L	L	L	-	L	L	L
PFNA	375-95-1	-	L	L	L	-	-	-	-
PFDA	335-76-2	-	L	L	L	-	-	-	-
PFUnA	2058-94-8	-	L	L	L	-	-	-	-
PFDoA	307-55-1	-	L	L	L	-	-	-	-
PFTrDA	72629-94-8	-	L	L	L	-	-	-	-
PFTeDA	376-06-7	-	L	L	L	-	-	-	-
NMeFOSAA	2355-31-9	-	L	L	L	-	-	-	-
NEtFOSAA	2991-50-6	-	L	L	L	-	-	-	-
PFBS	375-73-5	-	L	L	L	-	-	-	-
PFHxS	355-46-4	-	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br	-
PFOS	1763-23-1	-	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br	-

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

BATTELLE
It can

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

	J8389-FS (VC-HS09-SB02-0506)	J8390-FS (VC-HS09-SS03-000H)	J8391-FS (VC-HS09-SB03-0102)	J8392-FS (VC-HS09-SB03-0506)	J8401-FS (VC-HS09-SS01-000H)	J8402-FS (VC-HS09-SS02-000H)	J8403-FS (VC-AOC16-SS01-000H)	J8404-FS (VC-AOC16-SB01-0102)
PFHxA	-	-	-	-	L	-	L	L
PFHpA	-	-	-	-	L	-	L	L
PFOA	L	L	-	-	L	L	L	L
PFNA	-	-	-	-	-	-	L	L
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	L	-	-	L
PFHxS	-	-	-	-	L/Br	-	L/Br	L/Br
PFOS	-	L/Br	L/Br	-	L/Br	L/Br	L/Br	L/Br

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

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

	J8405-FS (VC-AOC16-SB01-0506)	J8406-FS (VC-AOC16-SS02-000H)	J8407-FS (VC-AOC16-SB02-0102)	J8408-FS (VC-AOC16-SB02-0506)	J8409-FS (VC-AOC16-SS03-000H)	J8410-FS (VC-AOC16-SB03-0102)	J8411-FS (VC-AOC16-SB03-0506)
PFHxA	L	L	L	L	L	L	L
PFHpA	L	L	L	L	L	L	L
PFOA	L	L	L	L	L	L	L
PFNA	L	L	L	-	L	-	-
PFDA	-	-	-	-	L	-	-
PFUnA	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-
PFBS	-	L	L	L	L	-	L
PFHxS	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br
PFOS	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br	L/Br

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

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

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Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KB77	L5	10/14/18 13:08	13C2-PFOA	77,227.86	38,613.93	115,841.79

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/14/18 12:25	13C2-PFOA	77,765.59	38,613.93	115,841.79	
KB74	L2	10/14/18 12:35	13C2-PFOA	80,226.33	38,613.93	115,841.79	
KB75	L3	10/14/18 12:46	13C2-PFOA	75,380.30	38,613.93	115,841.79	
KB76	L4	10/14/18 12:57	13C2-PFOA	78,496.63	38,613.93	115,841.79	
KB77	L5	10/14/18 13:08	13C2-PFOA	77,227.86	38,613.93	115,841.79	
KB78	L6	10/14/18 13:19	13C2-PFOA	75,790.65	38,613.93	115,841.79	
KB79	L7	10/14/18 13:30	13C2-PFOA	68,673.21	38,613.93	115,841.79	
KB80 IB	Instrument Blank	10/14/18 13:41	13C2-PFOA	75,584.96	38,613.93	115,841.79	
KB81 ICC	ICC	10/14/18 13:51	13C2-PFOA	84,191.62	38,613.93	115,841.79	
CR894PB-FS(3)	Procedural Blank	10/14/18 14:24	13C2-PFOA	77,779.32	38,613.93	115,841.79	
CR895LCS-FS(3)	Laboratory Control Sample	10/14/18 14:35	13C2-PFOA	80,627.48	38,613.93	115,841.79	
J8381-FS(3)	VC-PM64B-SB03-0506	10/14/18 14:46	13C2-PFOA	83,197.27	38,613.93	115,841.79	
J8386-FS(3)	VC-HS09-SB01-0102	10/14/18 14:57	13C2-PFOA	68,003.42	38,613.93	115,841.79	
J8387-FS(3)	VC-HS09-SB01-0506	10/14/18 15:07	13C2-PFOA	78,419.52	38,613.93	115,841.79	
J8388-FS(3)	VC-HS09-SB02-0102	10/14/18 15:18	13C2-PFOA	69,944.95	38,613.93	115,841.79	
J8389-FS(3)	VC-HS09-SB02-0506	10/14/18 15:29	13C2-PFOA	80,073.50	38,613.93	115,841.79	
J8390-FS(3)	VC-HS09-SS03-000H	10/14/18 15:40	13C2-PFOA	67,737.11	38,613.93	115,841.79	
J8391-FS(3)	VC-HS09-SB03-0102	10/14/18 15:51	13C2-PFOA	72,630.68	38,613.93	115,841.79	
J8392-FS(3)	VC-HS09-SB03-0506	10/14/18 16:02	13C2-PFOA	84,878.15	38,613.93	115,841.79	
KB76 CCV	CCV	10/14/18 16:13	13C2-PFOA	78,218.08	38,613.93	115,841.79	
J8393MS-FS(3)	VC-HS09-SB03-0506-MS	10/14/18 16:34	13C2-PFOA	80,729.09	38,613.93	115,841.79	
J8394MSD-FS(3)	VC-HS09-SB03-0506-MSD	10/14/18 16:45	13C2-PFOA	74,263.57	38,613.93	115,841.79	
J8401-FS(3)	VC-HS09-SS01-000H	10/14/18 16:56	13C2-PFOA	87,404.22	38,613.93	115,841.79	
J8402-FS(3)	VC-HS09-SS02-000H	10/14/18 17:07	13C2-PFOA	75,974.71	38,613.93	115,841.79	
J8403-FS(3)	VC-AOC16-SS01-000H	10/14/18 17:18	13C2-PFOA	85,965.39	38,613.93	115,841.79	
J8403-FS-D(5)	VC-AOC16-SS01-000H	10/14/18 17:29	13C2-PFOA	76,946.48	38,613.93	115,841.79	
J8404-FS(3)	VC-AOC16-SB01-0102	10/14/18 17:39	13C2-PFOA	78,411.40	38,613.93	115,841.79	
J8404-FS-D(5)	VC-AOC16-SB01-0102	10/14/18 17:50	13C2-PFOA	80,479.16	38,613.93	115,841.79	
J8404-FS-D(7)	VC-AOC16-SB01-0102	10/14/18 18:01	13C2-PFOA	83,104.01	38,613.93	115,841.79	
KB77 CCV	CCV	10/14/18 18:12	13C2-PFOA	87,822.06	38,613.93	115,841.79	
J8405-FS(3)	VC-AOC16-SB01-0506	10/14/18 18:34	13C2-PFOA	97,924.01	38,613.93	115,841.79	
J8406-FS(3)	VC-AOC16-SS02-000H	10/14/18 18:45	13C2-PFOA	81,601.63	38,613.93	115,841.79	
J8406-FS-D(5)	VC-AOC16-SS02-000H	10/14/18 18:55	13C2-PFOA	85,894.30	38,613.93	115,841.79	
J8407-FS(3)	VC-AOC16-SB02-0102	10/14/18 19:06	13C2-PFOA	73,234.32	38,613.93	115,841.79	
J8407-FS-D(5)	VC-AOC16-SB02-0102	10/14/18 19:17	13C2-PFOA	71,869.31	38,613.93	115,841.79	
J8407-FS-D(7)	VC-AOC16-SB02-0102	10/14/18 19:28	13C2-PFOA	87,316.22	38,613.93	115,841.79	
J8408-FS(3)	VC-AOC16-SB02-0506	10/14/18 19:39	13C2-PFOA	74,815.90	38,613.93	115,841.79	
J8409-FS(3)	VC-AOC16-SS03-000H	10/14/18 19:50	13C2-PFOA	74,991.82	38,613.93	115,841.79	
J8409-FS-D(5)	VC-AOC16-SS03-000H	10/14/18 20:01	13C2-PFOA	78,251.43	38,613.93	115,841.79	
KB76 CCV	CCV	10/14/18 20:11	13C2-PFOA	61,071.61	38,613.93	115,841.79	
J8410-FS(3)	VC-AOC16-SB03-0102	10/14/18 20:33	13C2-PFOA	71,304.44	38,613.93	115,841.79	
J8410-FS-D(5)	VC-AOC16-SB03-0102	10/14/18 20:44	13C2-PFOA	75,379.36	38,613.93	115,841.79	
J8411-FS(3)	VC-AOC16-SB03-0506	10/14/18 20:55	13C2-PFOA	88,363.21	38,613.93	115,841.79	
KB77 CCV	CCV	10/14/18 21:06	13C2-PFOA	77,962.69	38,613.93	115,841.79	

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

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Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KB77	L5	10/14/18 13:08	13C2-PFDA	89,813.46	44,906.73	134,720.19

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/14/18 12:25	13C2-PFDA	86,188.94	44,906.73	134,720.19	
KB74	L2	10/14/18 12:35	13C2-PFDA	88,161.46	44,906.73	134,720.19	
KB75	L3	10/14/18 12:46	13C2-PFDA	88,686.54	44,906.73	134,720.19	
KB76	L4	10/14/18 12:57	13C2-PFDA	95,650.49	44,906.73	134,720.19	
KB77	L5	10/14/18 13:08	13C2-PFDA	89,813.46	44,906.73	134,720.19	
KB78	L6	10/14/18 13:19	13C2-PFDA	97,422.57	44,906.73	134,720.19	
KB79	L7	10/14/18 13:30	13C2-PFDA	78,612.45	44,906.73	134,720.19	
KB80 IB	Instrument Blank	10/14/18 13:41	13C2-PFDA	83,522.57	44,906.73	134,720.19	
KB81 ICC	ICC	10/14/18 13:51	13C2-PFDA	89,002.65	44,906.73	134,720.19	
CR894PB-FS(3)	Procedural Blank	10/14/18 14:24	13C2-PFDA	87,598.10	44,906.73	134,720.19	
CR895LCS-FS(3)	Laboratory Control Sample	10/14/18 14:35	13C2-PFDA	96,516.75	44,906.73	134,720.19	
J8381-FS(3)	VC-PM64B-SB03-0506	10/14/18 14:46	13C2-PFDA	97,092.55	44,906.73	134,720.19	
J8386-FS(3)	VC-HS09-SB01-0102	10/14/18 14:57	13C2-PFDA	80,353.79	44,906.73	134,720.19	
J8387-FS(3)	VC-HS09-SB01-0506	10/14/18 15:07	13C2-PFDA	91,876.25	44,906.73	134,720.19	
J8388-FS(3)	VC-HS09-SB02-0102	10/14/18 15:18	13C2-PFDA	83,243.91	44,906.73	134,720.19	
J8389-FS(3)	VC-HS09-SB02-0506	10/14/18 15:29	13C2-PFDA	91,186.86	44,906.73	134,720.19	
J8390-FS(3)	VC-HS09-SS03-000H	10/14/18 15:40	13C2-PFDA	82,560.02	44,906.73	134,720.19	
J8391-FS(3)	VC-HS09-SB03-0102	10/14/18 15:51	13C2-PFDA	91,864.56	44,906.73	134,720.19	
J8392-FS(3)	VC-HS09-SB03-0506	10/14/18 16:02	13C2-PFDA	95,337.53	44,906.73	134,720.19	
KB76 CCV	CCV	10/14/18 16:13	13C2-PFDA	86,301.42	44,906.73	134,720.19	
J8393MS-FS(3)	VC-HS09-SB03-0506-MS	10/14/18 16:34	13C2-PFDA	94,762.03	44,906.73	134,720.19	
J8394MSD-FS(3)	VC-HS09-SB03-0506-MSD	10/14/18 16:45	13C2-PFDA	88,407.17	44,906.73	134,720.19	
J8401-FS(3)	VC-HS09-SS01-000H	10/14/18 16:56	13C2-PFDA	105,502.02	44,906.73	134,720.19	
J8402-FS(3)	VC-HS09-SS02-000H	10/14/18 17:07	13C2-PFDA	89,052.60	44,906.73	134,720.19	
J8403-FS(3)	VC-AOC16-SS01-000H	10/14/18 17:18	13C2-PFDA	94,655.06	44,906.73	134,720.19	
J8403-FS-D(5)	VC-AOC16-SS01-000H	10/14/18 17:29	13C2-PFDA	79,888.05	44,906.73	134,720.19	
J8404-FS(3)	VC-AOC16-SB01-0102	10/14/18 17:39	13C2-PFDA	91,936.85	44,906.73	134,720.19	
J8404-FS-D(5)	VC-AOC16-SB01-0102	10/14/18 17:50	13C2-PFDA	99,337.94	44,906.73	134,720.19	
J8404-FS-D(7)	VC-AOC16-SB01-0102	10/14/18 18:01	13C2-PFDA	87,041.80	44,906.73	134,720.19	
KB77 CCV	CCV	10/14/18 18:12	13C2-PFDA	100,176.67	44,906.73	134,720.19	
J8405-FS(3)	VC-AOC16-SB01-0506	10/14/18 18:34	13C2-PFDA	107,140.29	44,906.73	134,720.19	
J8406-FS(3)	VC-AOC16-SS02-000H	10/14/18 18:45	13C2-PFDA	102,852.70	44,906.73	134,720.19	
J8406-FS-D(5)	VC-AOC16-SS02-000H	10/14/18 18:55	13C2-PFDA	103,642.75	44,906.73	134,720.19	
J8407-FS(3)	VC-AOC16-SB02-0102	10/14/18 19:06	13C2-PFDA	88,161.48	44,906.73	134,720.19	
J8407-FS-D(5)	VC-AOC16-SB02-0102	10/14/18 19:17	13C2-PFDA	88,342.48	44,906.73	134,720.19	
J8407-FS-D(7)	VC-AOC16-SB02-0102	10/14/18 19:28	13C2-PFDA	97,005.37	44,906.73	134,720.19	
J8408-FS(3)	VC-AOC16-SB02-0506	10/14/18 19:39	13C2-PFDA	88,217.48	44,906.73	134,720.19	
J8409-FS(3)	VC-AOC16-SS03-000H	10/14/18 19:50	13C2-PFDA	99,820.26	44,906.73	134,720.19	
J8409-FS-D(5)	VC-AOC16-SS03-000H	10/14/18 20:01	13C2-PFDA	86,950.54	44,906.73	134,720.19	
KB76 CCV	CCV	10/14/18 20:11	13C2-PFDA	65,504.33	44,906.73	134,720.19	
J8410-FS(3)	VC-AOC16-SB03-0102	10/14/18 20:33	13C2-PFDA	88,082.77	44,906.73	134,720.19	
J8410-FS-D(5)	VC-AOC16-SB03-0102	10/14/18 20:44	13C2-PFDA	88,709.92	44,906.73	134,720.19	
J8411-FS(3)	VC-AOC16-SB03-0506	10/14/18 20:55	13C2-PFDA	99,252.24	44,906.73	134,720.19	
KB77 CCV	CCV	10/14/18 21:06	13C2-PFDA	95,624.37	44,906.73	134,720.19	

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	10/14/18 13:08	13C4-PFOS	29,058.35	14,529.18	43,587.53

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/14/18 12:25	13C4-PFOS	26,230.38	14,529.18	43,587.53	
KB74	L2	10/14/18 12:35	13C4-PFOS	31,838.16	14,529.18	43,587.53	
KB75	L3	10/14/18 12:46	13C4-PFOS	26,637.97	14,529.18	43,587.53	
KB76	L4	10/14/18 12:57	13C4-PFOS	27,528.74	14,529.18	43,587.53	
KB77	L5	10/14/18 13:08	13C4-PFOS	29,058.35	14,529.18	43,587.53	
KB78	L6	10/14/18 13:19	13C4-PFOS	27,746.91	14,529.18	43,587.53	
KB79	L7	10/14/18 13:30	13C4-PFOS	22,794.83	14,529.18	43,587.53	
KB80 IB	Instrument Blank	10/14/18 13:41	13C4-PFOS	27,916.23	14,529.18	43,587.53	
KB81 ICC	ICC	10/14/18 13:51	13C4-PFOS	29,947.74	14,529.18	43,587.53	
CR894PB-FS(3)	Procedural Blank	10/14/18 14:24	13C4-PFOS	28,483.71	14,529.18	43,587.53	
CR895LCS-FS(3)	Laboratory Control Sample	10/14/18 14:35	13C4-PFOS	26,540.09	14,529.18	43,587.53	
J8381-FS(3)	VC-PM64B-SB03-0506	10/14/18 14:46	13C4-PFOS	30,458.62	14,529.18	43,587.53	
J8386-FS(3)	VC-HS09-SB01-0102	10/14/18 14:57	13C4-PFOS	24,024.25	14,529.18	43,587.53	
J8387-FS(3)	VC-HS09-SB01-0506	10/14/18 15:07	13C4-PFOS	26,712.19	14,529.18	43,587.53	
J8388-FS(3)	VC-HS09-SB02-0102	10/14/18 15:18	13C4-PFOS	29,675.61	14,529.18	43,587.53	
J8389-FS(3)	VC-HS09-SB02-0506	10/14/18 15:29	13C4-PFOS	27,521.24	14,529.18	43,587.53	
J8390-FS(3)	VC-HS09-SS03-000H	10/14/18 15:40	13C4-PFOS	22,744.70	14,529.18	43,587.53	
J8391-FS(3)	VC-HS09-SB03-0102	10/14/18 15:51	13C4-PFOS	25,812.97	14,529.18	43,587.53	
J8392-FS(3)	VC-HS09-SB03-0506	10/14/18 16:02	13C4-PFOS	30,535.65	14,529.18	43,587.53	
KB76 CCV	CCV	10/14/18 16:13	13C4-PFOS	27,549.91	14,529.18	43,587.53	
J8393MS-FS(3)	VC-HS09-SB03-0506-MS	10/14/18 16:34	13C4-PFOS	26,211.37	14,529.18	43,587.53	
J8394MSD-FS(3)	VC-HS09-SB03-0506-MSD	10/14/18 16:45	13C4-PFOS	30,754.97	14,529.18	43,587.53	
J8401-FS(3)	VC-HS09-SS01-000H	10/14/18 16:56	13C4-PFOS	32,561.66	14,529.18	43,587.53	
J8402-FS(3)	VC-HS09-SS02-000H	10/14/18 17:07	13C4-PFOS	26,916.80	14,529.18	43,587.53	
J8403-FS(3)	VC-AOC16-SS01-000H	10/14/18 17:18	13C4-PFOS	24,350.39	14,529.18	43,587.53	
J8403-FS-D(5)	VC-AOC16-SS01-000H	10/14/18 17:29	13C4-PFOS	24,757.95	14,529.18	43,587.53	
J8404-FS(3)	VC-AOC16-SB01-0102	10/14/18 17:39	13C4-PFOS	23,471.38	14,529.18	43,587.53	
J8404-FS-D(5)	VC-AOC16-SB01-0102	10/14/18 17:50	13C4-PFOS	24,024.72	14,529.18	43,587.53	
J8404-FS-D(7)	VC-AOC16-SB01-0102	10/14/18 18:01	13C4-PFOS	27,938.59	14,529.18	43,587.53	
KB77 CCV	CCV	10/14/18 18:12	13C4-PFOS	32,152.64	14,529.18	43,587.53	
J8405-FS(3)	VC-AOC16-SB01-0506	10/14/18 18:34	13C4-PFOS	31,809.83	14,529.18	43,587.53	
J8406-FS(3)	VC-AOC16-SS02-000H	10/14/18 18:45	13C4-PFOS	19,139.52	14,529.18	43,587.53	
J8406-FS-D(5)	VC-AOC16-SS02-000H	10/14/18 18:55	13C4-PFOS	28,486.83	14,529.18	43,587.53	
J8407-FS(3)	VC-AOC16-SB02-0102	10/14/18 19:06	13C4-PFOS	20,620.65	14,529.18	43,587.53	
J8407-FS-D(5)	VC-AOC16-SB02-0102	10/14/18 19:17	13C4-PFOS	22,690.76	14,529.18	43,587.53	
J8407-FS-D(7)	VC-AOC16-SB02-0102	10/14/18 19:28	13C4-PFOS	27,780.31	14,529.18	43,587.53	
J8408-FS(3)	VC-AOC16-SB02-0506	10/14/18 19:39	13C4-PFOS	25,760.41	14,529.18	43,587.53	
J8409-FS(3)	VC-AOC16-SS03-000H	10/14/18 19:50	13C4-PFOS	22,165.59	14,529.18	43,587.53	
J8409-FS-D(5)	VC-AOC16-SS03-000H	10/14/18 20:01	13C4-PFOS	25,797.29	14,529.18	43,587.53	
KB76 CCV	CCV	10/14/18 20:11	13C4-PFOS	17,017.11	14,529.18	43,587.53	
J8410-FS(3)	VC-AOC16-SB03-0102	10/14/18 20:33	13C4-PFOS	20,132.90	14,529.18	43,587.53	
J8410-FS-D(5)	VC-AOC16-SB03-0102	10/14/18 20:44	13C4-PFOS	25,897.92	14,529.18	43,587.53	
J8411-FS(3)	VC-AOC16-SB03-0506	10/14/18 20:55	13C4-PFOS	29,698.16	14,529.18	43,587.53	
KB77 CCV	CCV	10/14/18 21:06	13C4-PFOS	31,419.64	14,529.18	43,587.53	

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 17/10/2018 11:13:31 AM

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 1:30:11 PM	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.55	23	>10
PFBS_2	298.9 / 99.0	1.55	24	>10
PFHxA_1	313.0 / 269.0	1.87	23	>10
PFHxA_2	313.0 / 119.0	1.86	23	>10
PFHpA_1	363.0 / 319.0	2.27	29	>10
PFHpA_2	363.0 / 169.0	2.27	33	>10
PFHxS_1	399.0 / 80.0	2.30	55	>10
PFHxS_2	399.0 / 99.0	2.30	44	>10
PFOA_1	413.0 / 369.0	2.68	38	>10
PFOA_2	413.0 / 169.0	2.68	39	>10
PFNA_1	463.0 / 419.0	3.08	33	>10
PFNA_2	463.0 / 219.0	3.08	48	>10
PFOS_1	499.0 / 80.0	3.08	51	>10
PFOS_2	499.0 / 99.0	3.08	48	>10
PFDA_1	513.0 / 469.0	3.44	47	>10
PFDA_2	513.0 / 219.0	3.44	43	>10
PFUnA_1	563.0 / 519.0	3.76	62	>10
PFUnA_2	563.0 / 269.0	3.76	52	>10
PFDoA_1	613.0 / 569.0	4.05	62	>10
PFDoA_2	613.0 / 319.0	4.05	47	>10
PFTrDA_1	663.0 / 619.0	4.30	71	>10
PFTrDA_2	663.0 / 169.0	4.30	63	>10
PFTeDA_1	713.0 / 669.0	4.52	94	>10
PFTeDA_2	713.0 / 169.0	4.51	53	>10
NMeFOSAA_1	570.0 / 419.0	3.59	22	>10
NMeFOSAA_2	570.0 / 512.0	3.59	36	>10
NEtFOSAA_1	584.0 / 419.0	3.76	40	>10
NEtFOSAA_2	584.0 / 483.0	3.76	24	>10

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 17/10/2018 11:14:59 AM

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 1:30:11 PM	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	4.04	46	>10
d3-MeFOSAA	573.0 / 419.0	3.58	27	>10
d5-EtFOSAA	589.0 / 419.0	3.75	21	>10
13C5-PFHxA	318.0 / 273.0	1.85	49	>10
13C4-PFHpA	367.0 / 322.0	2.26	30	>10
13C8-PFOA	421.0 / 376.0	2.67	42	>10
13C9-PFNA	472.0 / 427.0	3.07	28	>10
13C6-PFDA	519.0 / 474.0	3.42	36	>10
13C7-PFUnA	570.0 / 525.0	3.75	41	>10
13C2-PFTeDA	715.0 / 670.0	4.51	41	>10
13C3-PFBS	302.0 / 99.0	1.53	33	>10
13C3-PFHxS	402.0 / 99.0	2.29	33	>10
13C8-PFOS	507.0 / 99.0	3.07	31	>10

BATTELLE
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	11.15	2.17	4.34	24
PFHpA	375-85-9	11.15	1.9	3.8	24
PFOA	335-67-1	11.27	1.9	3.8	24
PFNA	375-95-1	10.99	1.68	3.36	24
PFDA	335-76-2	11.72	2.13	4.26	24
PFUnA	2058-94-8	11.5	1.88	3.76	24
PFDoA	307-55-1	11.61	1.58	3.16	24
PFTrDA	72629-94-8	10.87	1.32	2.64	24
PFTeDA	376-06-7	11.92	2.25	4.5	24
NMeFOSAA	2355-31-9	11.65	1.6	3.2	24
NEtFOSAA	2991-50-6	10.73	1.5	3	24
PFOSA	754-91-6	10.75	1.63	3.26	4
PFBS	375-73-5	11.63	1.75	3.5	24
PFPeS	BDO-2114	11.67	1.22	2.44	4
PFHxS	355-46-4	11.24	1.78	3.56	24
PFHpS	375-99-6	11.05	1.68	3.36	20
PFOS	1763-23-1	10.99	1.61	3.22	24
PFNS	98789-57-2	10.67	1.01	2.02	4
PFDS	2806-15-7	11.84	2.23	4.46	20
4:2FTS	BDO-2205	12.03	1.86	3.72	20
6:2FTS	27619-97-2	12.48	1.33	2.66	12
8:2FTS	39108-34-4	12.08	2.01	4.02	20

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

Analytical SOP 5-369
Extraction SOP 5-370

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

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

Analytes on NELAP and ELAP QSM 5.1 Scope of accreditation

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ID 595 04/18

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

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

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

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

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

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Solids Calibration to Sample Equivalents

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

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

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

QTRAP 5500
Preventive Maintenance Checklist

Preventive Maintenance Date:	12-June-2018

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

☑ **PASS** ☐ **FAIL**

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

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

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

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

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

Approved By :_____ **Date:** _____

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

PRE PM PPG PERFORMANCE EVALUATION:

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

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

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

☑ No degradation or Sensitivity drop

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

☑ No degradation or Sensitivity drop

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

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

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

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

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

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

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

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

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

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

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

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

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

PREVENTIVE MAINTENANCE CHECKLIST:

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

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

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

☑Pump down overnight if possible. ☐ N/A

☑Perform Maintenance on Turbo V source.

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

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QTRAP 5500

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

POST PM PPG PERFORMANCE TESTS:

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

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

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

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

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

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

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

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

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

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

Mass	Scan Rate	Mca	Q1 Intensity		Q1 Width Value	Width Specs
			Value	Spec		
Q1 933.636	10	10	1.35 e7	≥1.0^e7	0.7486	0.6 to 0.8
Q1 933.636	1000	50	7.52 e7	≥4.0^e7	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^e6	0.7492	0.6 to 0.8
Q3 933.636	1000	50	8.33 e7	≥4.0^e7	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 ^e6	0.1473	<0.35
ER 922.010	0.05	4.96 e7	≥2.8 ^e6	0.2434	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 118.087	0.05		≥2.4 ^e7		<0.65
ER 922.010	0.05		≥6.8 ^e7		<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 ^e7	0.1862	<0.35
ER 601.978	0.05	1.70 e8	≥5.6 ^e7	0.1809	<0.35
ScanRate : 10000 Da/s ; 50 Mca					
ER 431.982	0.05	5.72 e8	≥1.2 ^e8	0.5102	<0.65
ER 601.978	0.05	4.52 e8	≥1.6 ^e8	0.6187	<0.65

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QTRAP 5500

LC/MS/MS Detector System

Appendix ZEFPM003-2L

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

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

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

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

REVIEW:

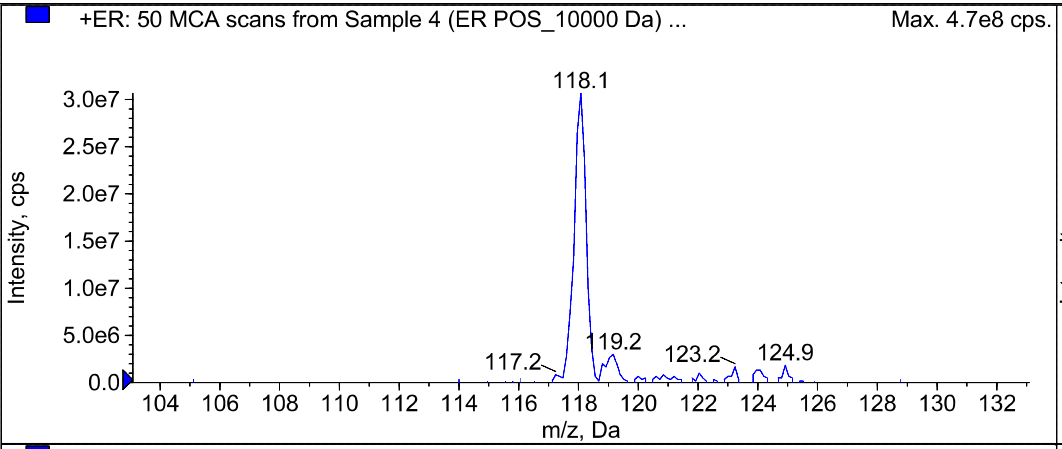
☑ Attach all spectrums printouts to this procedure.
☑ If any parameter setting access modes were changed during the PM, ensure they are returned to their normal access mode and that their offsets are adjusted to match optimized values from the post-PM acquisition files.
☐ Empty tuning cache folder, if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

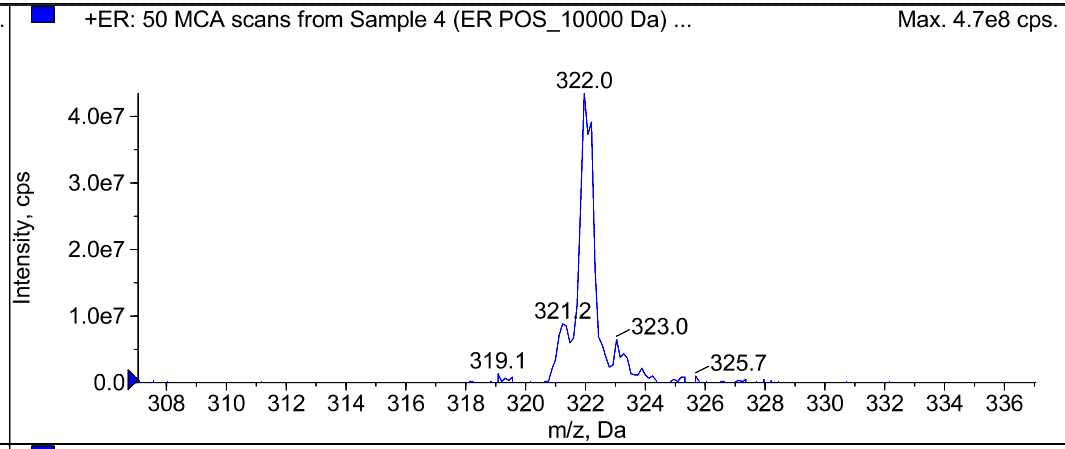
END OF PREVENTIVE MAINTENANCE CHECKLIST

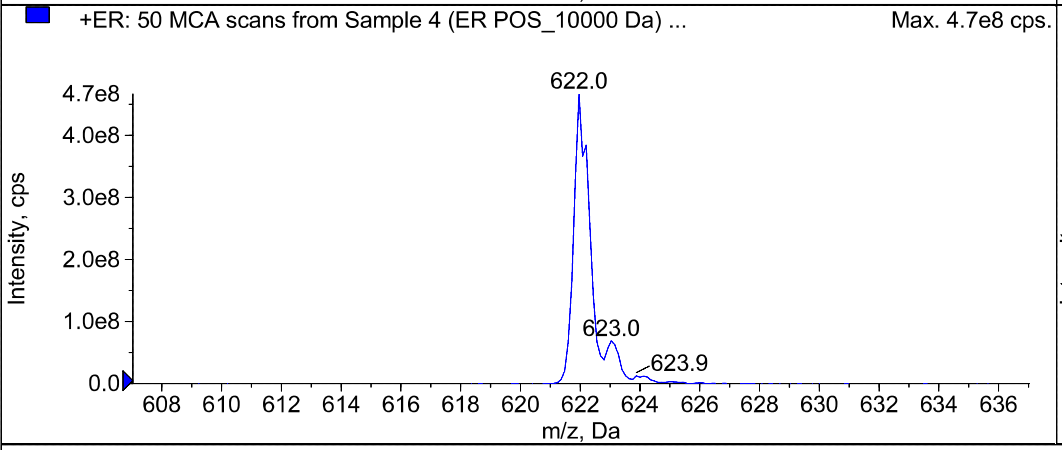
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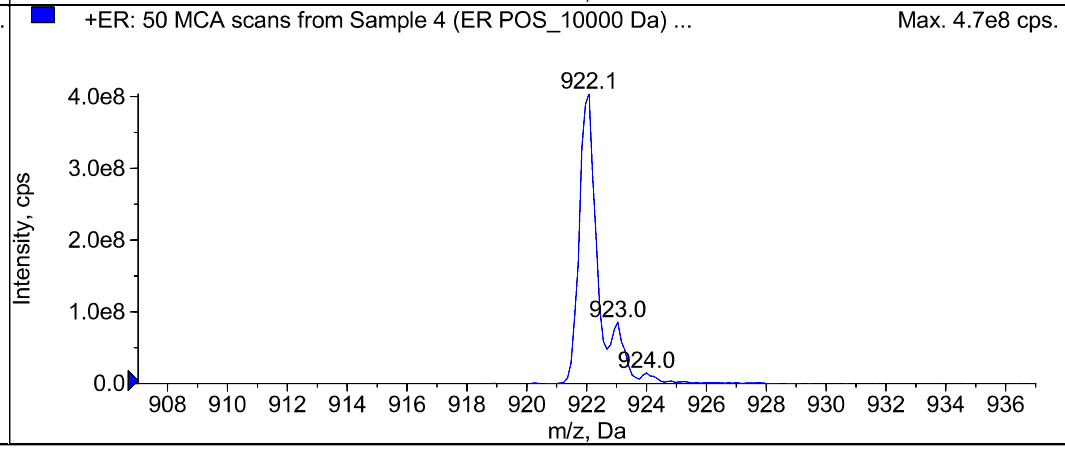
06 OCT 2016: Appendix ZEFPM003-2L: Removed requirements to fit Manufacturer's testing criteria.

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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)
JY27	PFAS - DoD High Level Labelled Extracted Internal Standards (SIS)	-	180726-05
KC03	PFAS - DoD Internal Standard Spiking Solution	JY25	180726-04
KB83	PFAS - DoD High Level Second Source LCS/MS Solution	-	181001-01
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
KB72	PFAS - DoD Low Level Labelled Extracted Internal Standard (SIS)	KB71	180726-05
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	KB70	180705-02
KB75	PFAS - DoD Calibration L3	KB71	180726-05
KB75	PFAS - DoD Calibration L3	JY25	180726-04
KB76	PFAS - DoD Calibration L4	JY25	180726-04
KB76	PFAS - DoD Calibration L4	KB71	180726-05
KB76	PFAS - DoD Calibration L4	KB70	180705-02
KB77	PFAS - DoD Calibration L5	KB70	180705-02
KB77	PFAS - DoD Calibration L5	KB71	180726-05
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

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: **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

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB70**

Description: PFAS - DoD High ICAL Stock

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

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

Balance ID:

Comment: 96/4 Methanol/milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB70

Description: PFAS - DoD High ICAL Stock

Stock Id: 180705-02

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

Final Concentrations:

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

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

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

Comment: 96/4 Methanol/milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: **KB70**

Description: PFAS - DoD High ICAL Stock

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

Syringes/Pipettes:

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

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

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

Comment: 96/4 Methanol/milli-q water

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

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **KB71**

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

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

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

Balance ID: _____

Comment: 96/4 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB71

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

Stock Id: 180726-05

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

Final Concentrations:

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

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

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

Comment: 96/4 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB71

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

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

Syringes/Pipettes:

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

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

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

Comment: 96/4 Methanol/Milli-q water

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

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☑

Standard Laboratory ID Number: **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: KB83

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: 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: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☐

Standard Laboratory ID Number: KB83

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: 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: _____ **Date:** _____

BATTELLE
It can be done

Standard Solution Prep Form II

Approved: ☐

Standard Laboratory ID Number: **KB83**

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	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: _____ **Date:** _____

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

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

17024-01

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

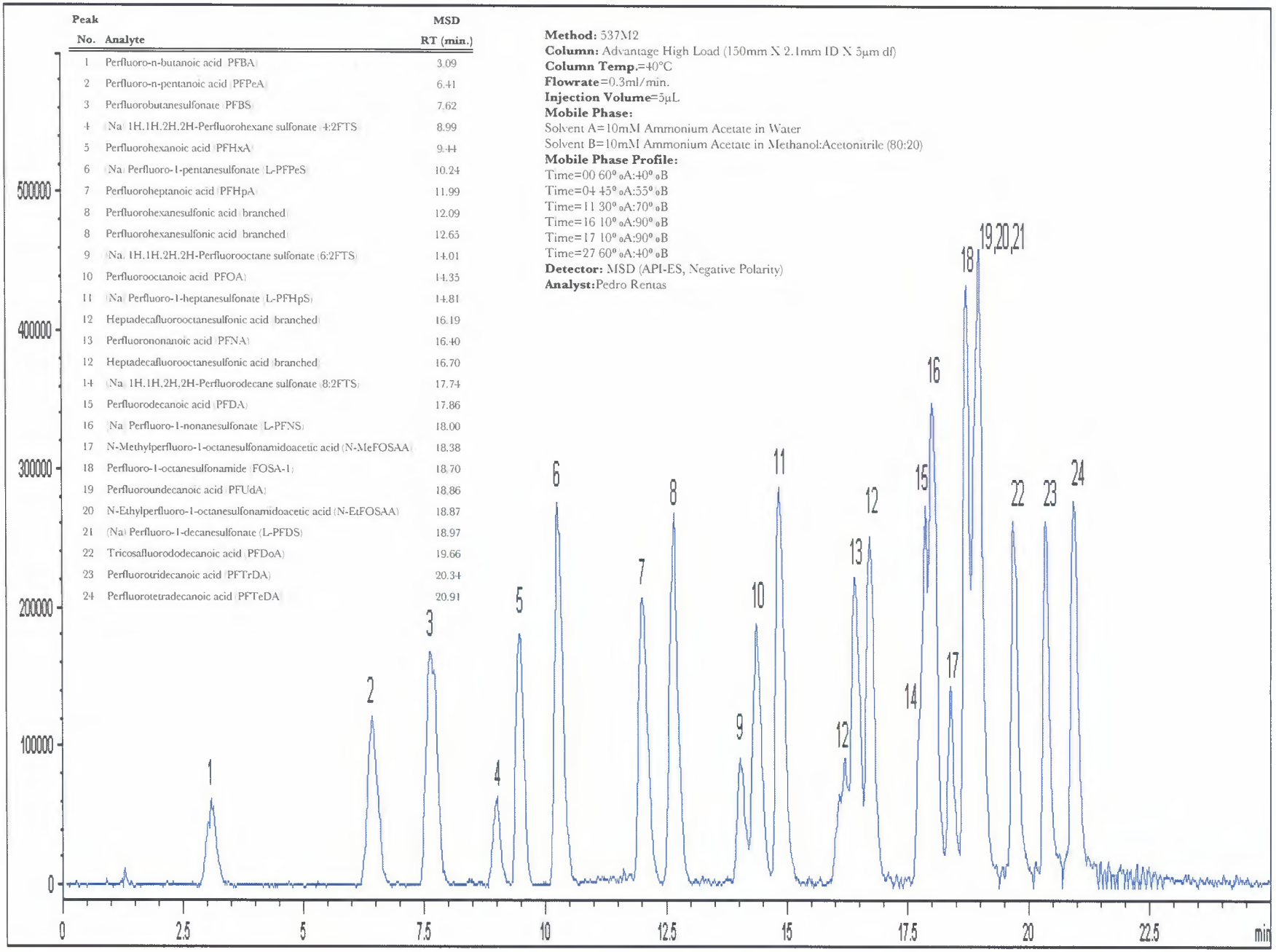
Note: All assigned values are anion concentrations.

	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)	12.65
9	(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)	14.01
10	Perfluorooctanoic acid (PFOA)	14.35
11	(Na) Perfluoro-1-heptanesulfonate (L-PFHpS)	14.81
12	Heptadecafluorooctanesulfonic acid (branched)	16.19
13	Perfluorononanoic acid (PFNA)	16.40
12	Heptadecafluorooctanesulfonic acid (branched)	16.70
14	(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)	17.74
15	Perfluorodecanoic acid (PFDA)	17.86
16	(Na) Perfluoro-1-nonanesulfonate (L-PFNS)	18.00
17	N-Methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	18.38
18	Perfluoro-1-octanesulfonamide (FOSA-1)	18.70
19	Perfluoroundecanoic acid (PFUdA)	18.86
20	N-Ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	18.87
21	(Na) Perfluoro-1-decanesulfonate (L-PFDS)	18.97
22	Tricosafluorododecanoic acid (PFDoA)	19.66
23	Perfluorotridecanoic acid (PFTrDA)	20.34
24	Perfluorotetradecanoic acid (PFTeDA)	20.91

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



BATTELLE

It can be done

BDO Id: 180618-02

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-02

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-NEtFOSAA

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

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

DESCRIPTION:

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HANDLING:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. A1226

ANAB ACCREDITED 17034 REFERENCE MATERIAL PRODUCER

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

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

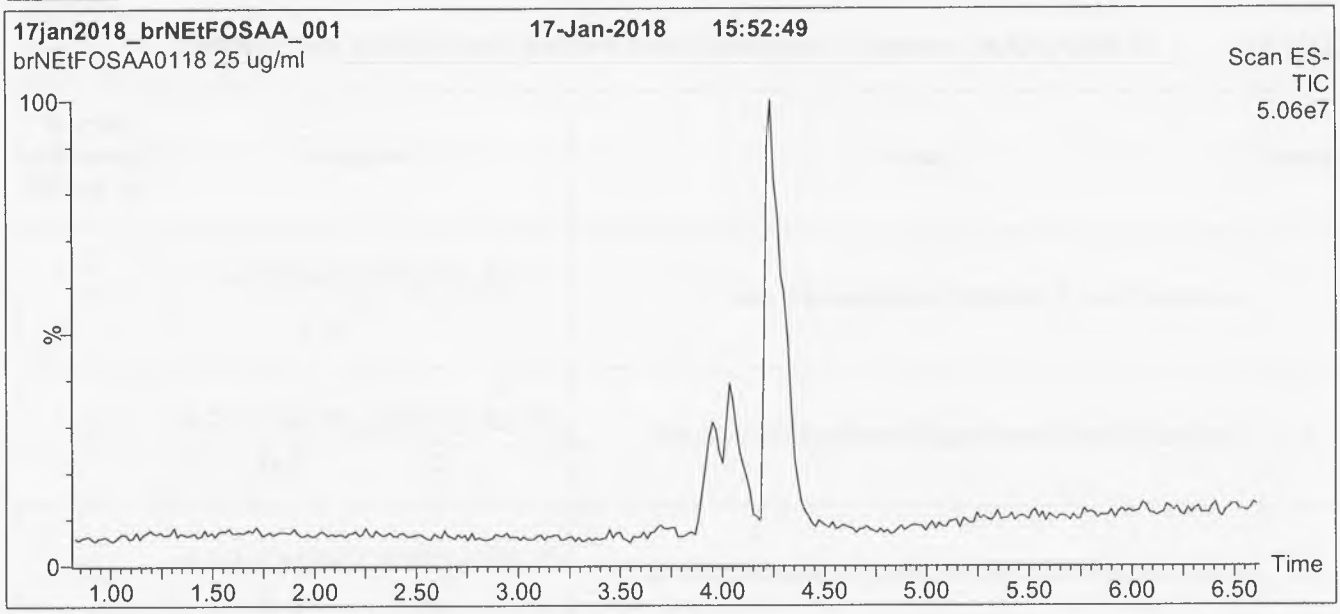
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(C_2H_5)CH_2CO_2H$	77.5
2	N-ethylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	2.3
3	N-ethylperfluoro-4-methylheptanesulfonamidoacetic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

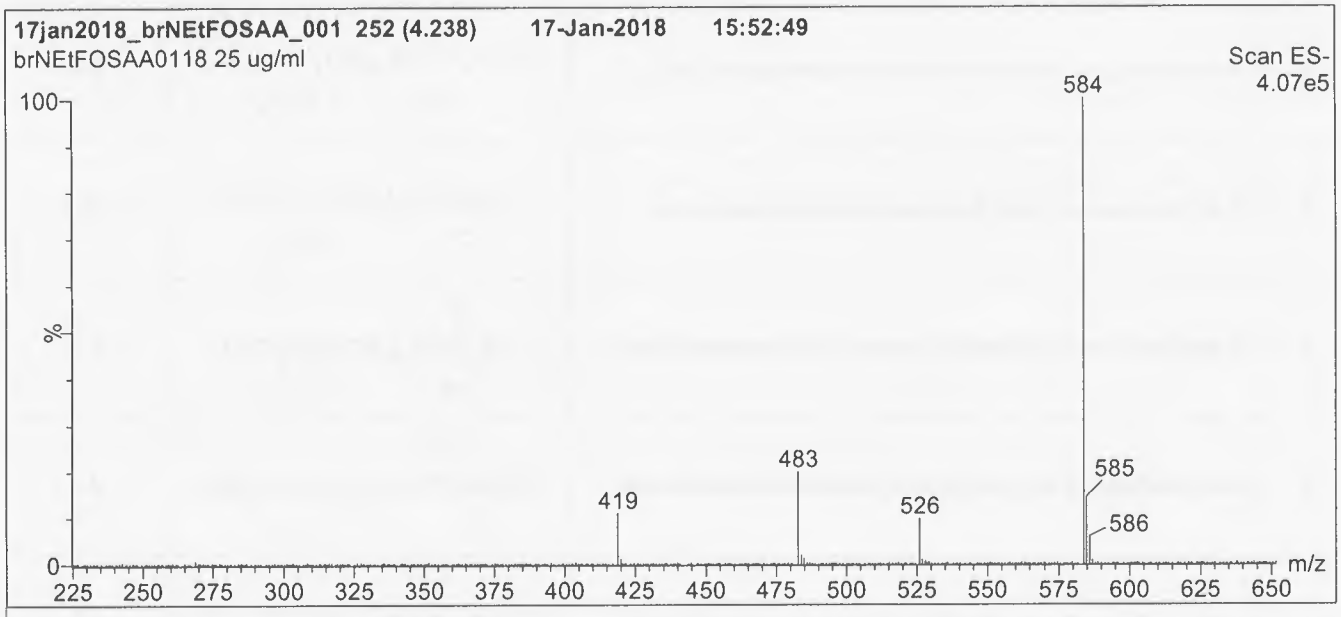
* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

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

B.G. Chittim, General Manager

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





Conditions for Figure 1:

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

Chromatographic Conditions

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

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

Time: 10 min

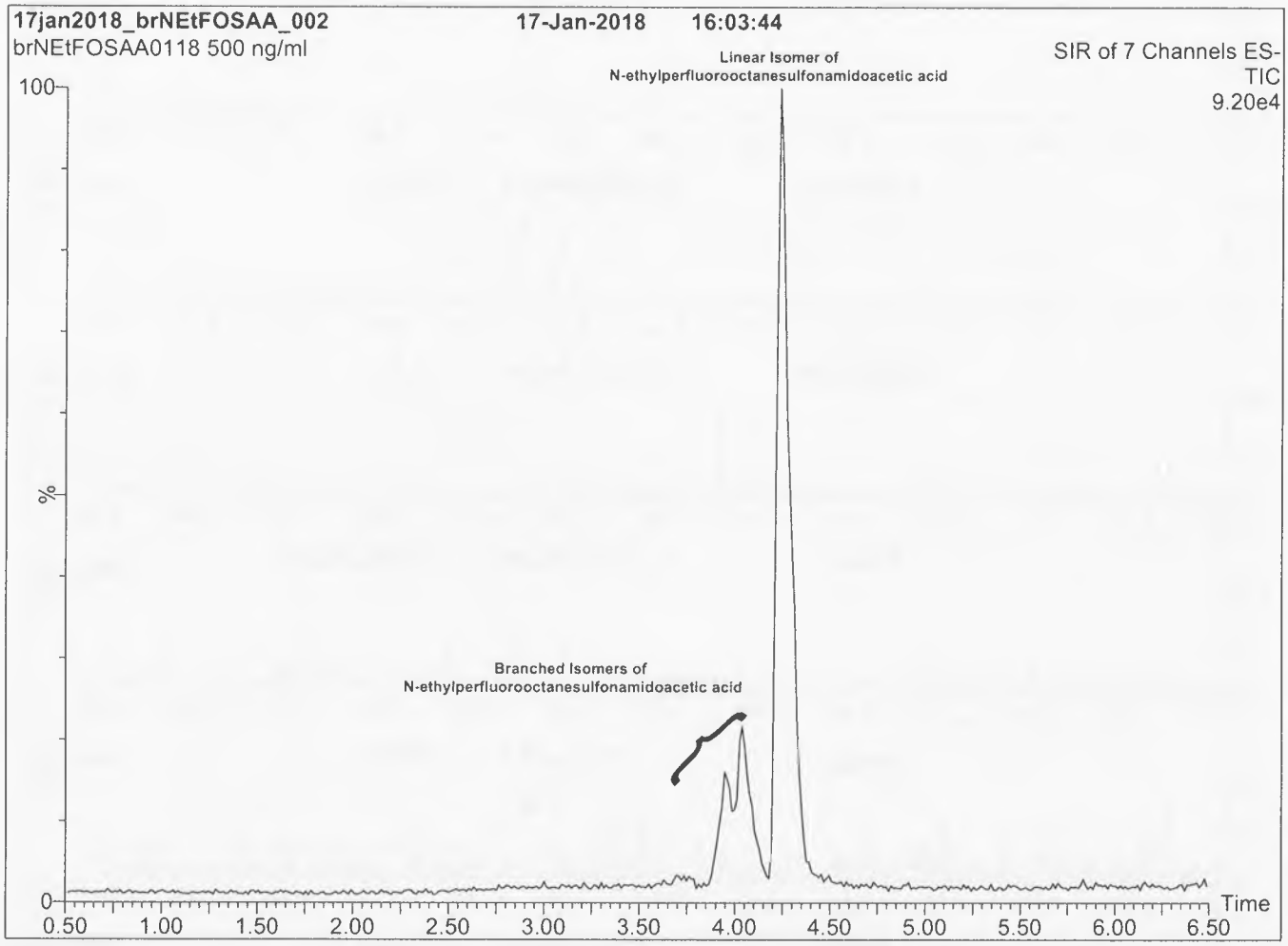
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

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

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



Conditions for Figure 2:

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

Chromatographic Conditions

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

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

Time: 10 min

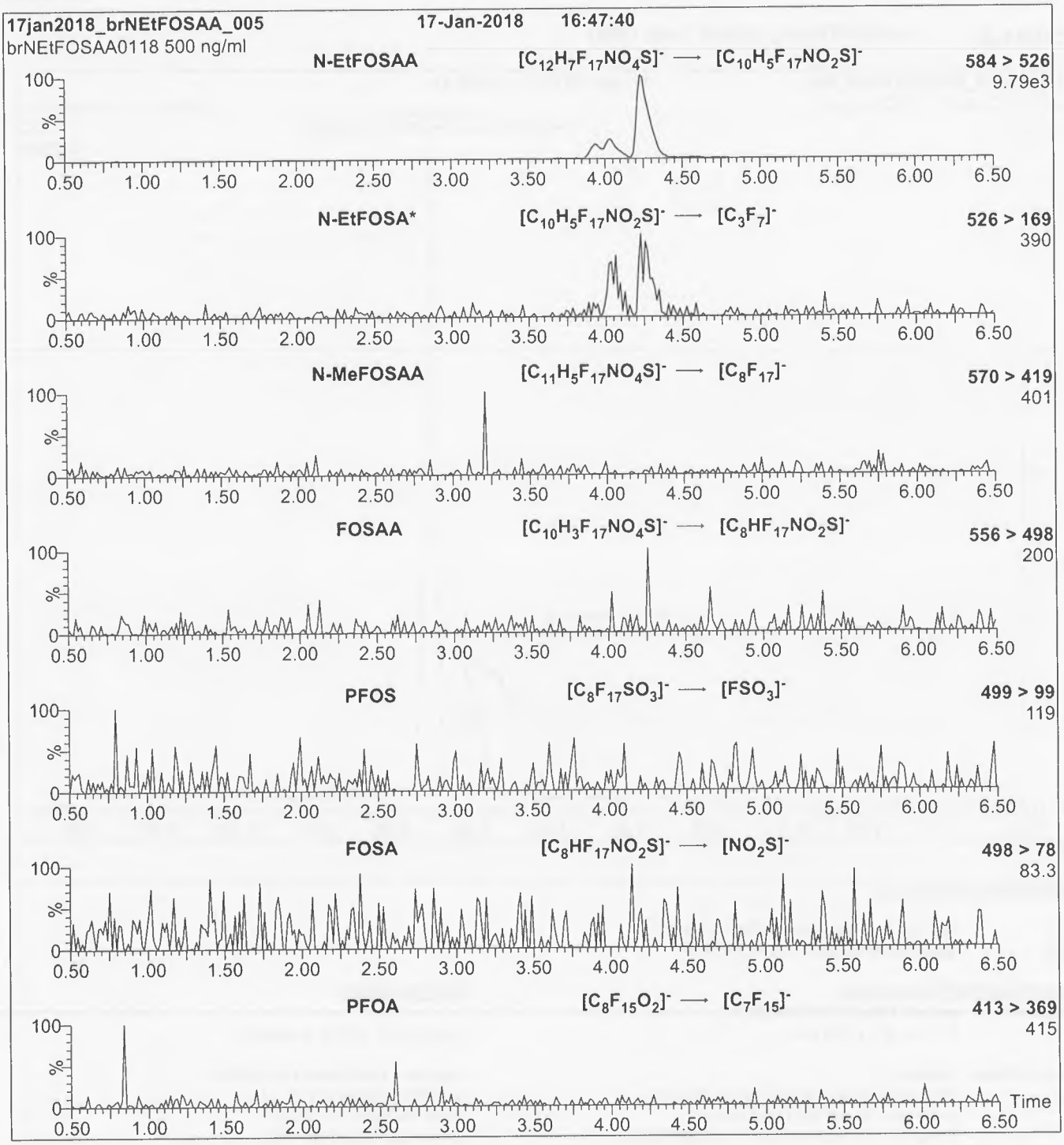
Flow: 300 µl/min

MS Parameters

Experiment: SIR (7 channels)

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

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



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

Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

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

BATTELLE
It can be done

BDO Id: 180618-03

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-03

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

br-NMeFOSAA

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

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

DESCRIPTION:

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HANDLING:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

The combined relative standard uncertainty, $u_c(y)$, of a value y and the uncertainty of the independent parameters $x_1, x_2, \ldots x_n$ 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 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)***

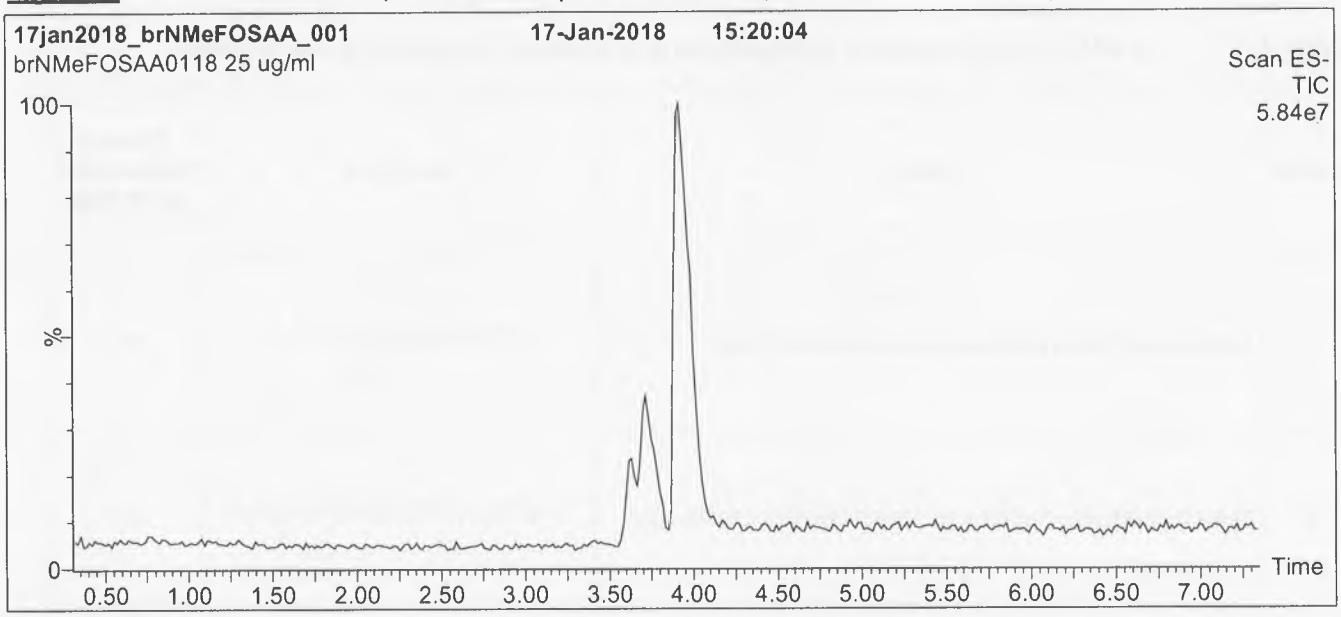
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2H$	76.0
2	N-methylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CO_2H$	0.7
3	N-methylperfluoro-4-methylheptanesulfonamidoacetic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

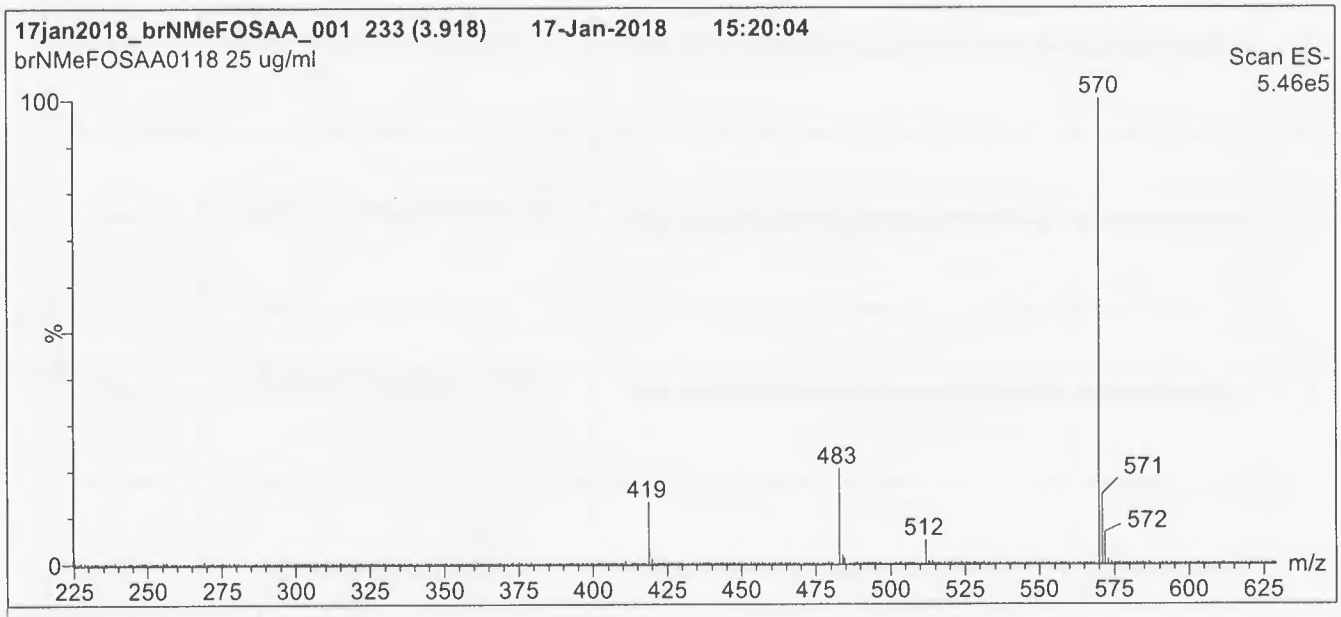
* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

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

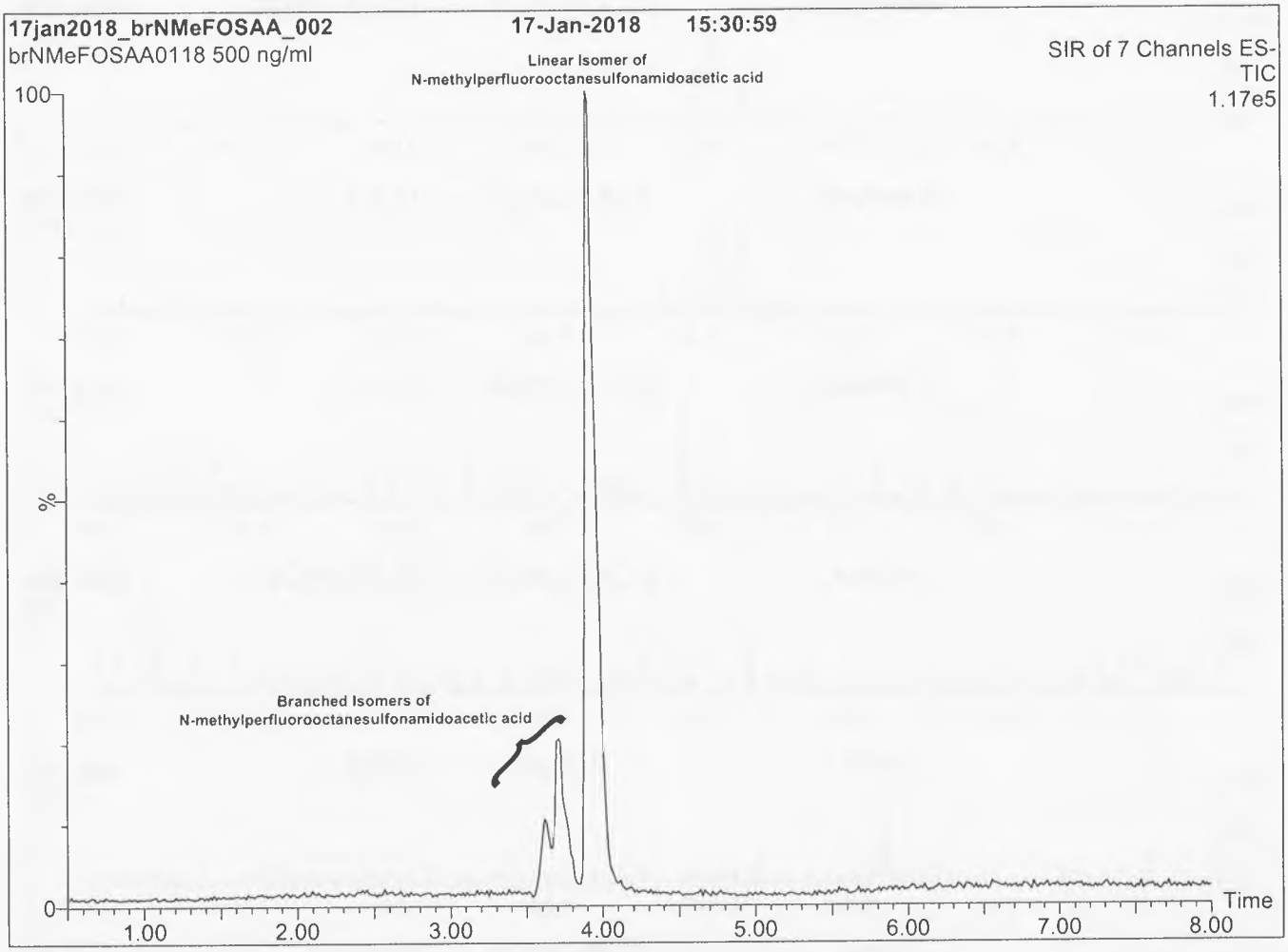
Flow: 300 µl/min

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

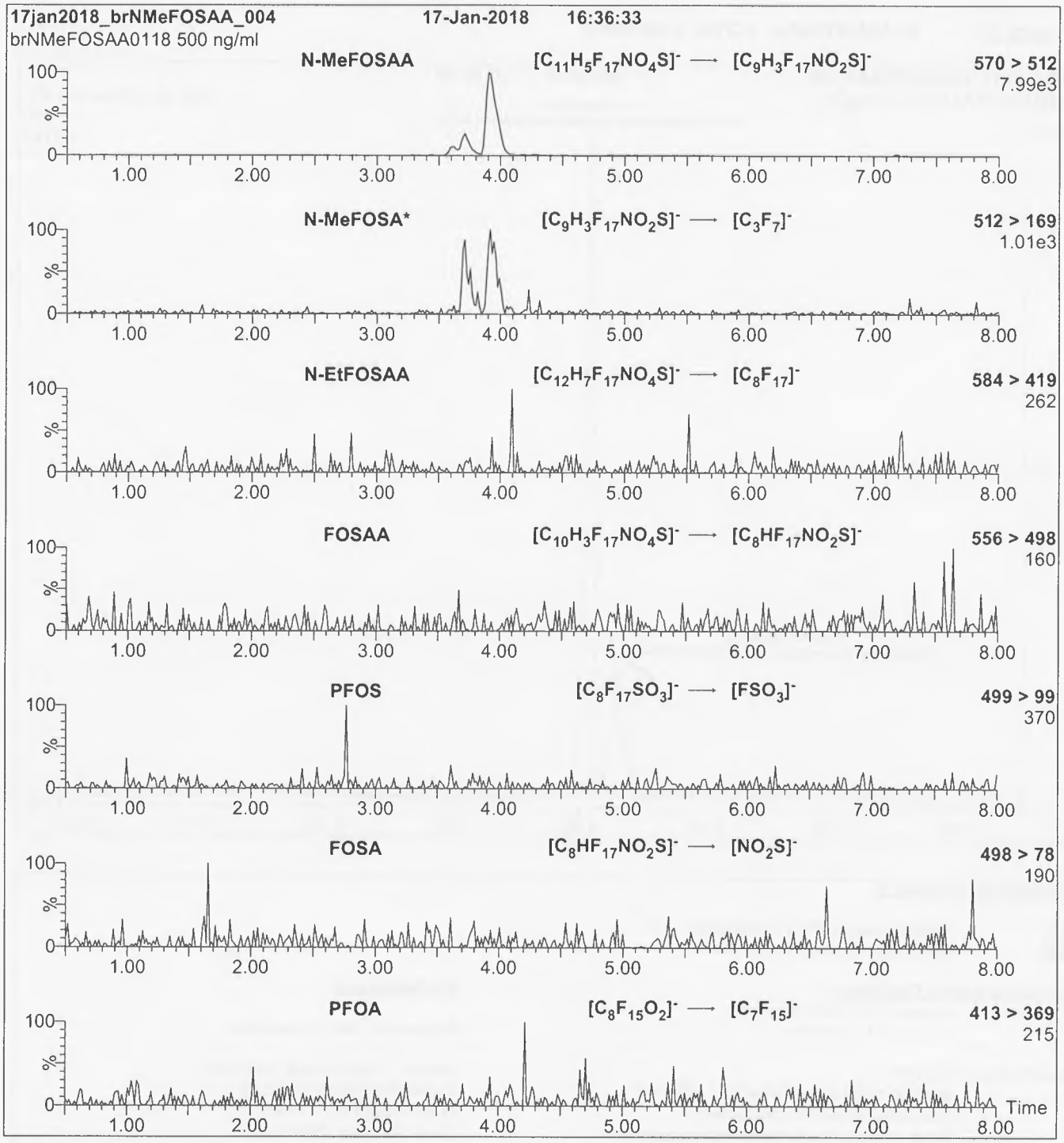
Flow: 300 µl/min

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:

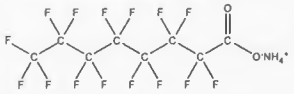
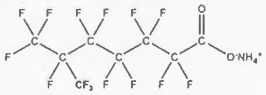
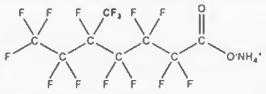
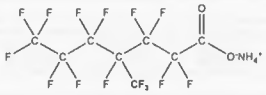
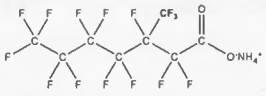
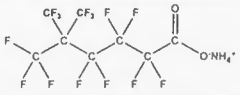
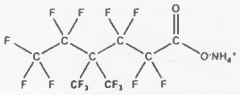
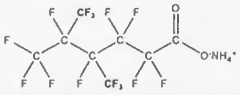
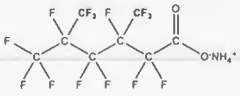
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

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

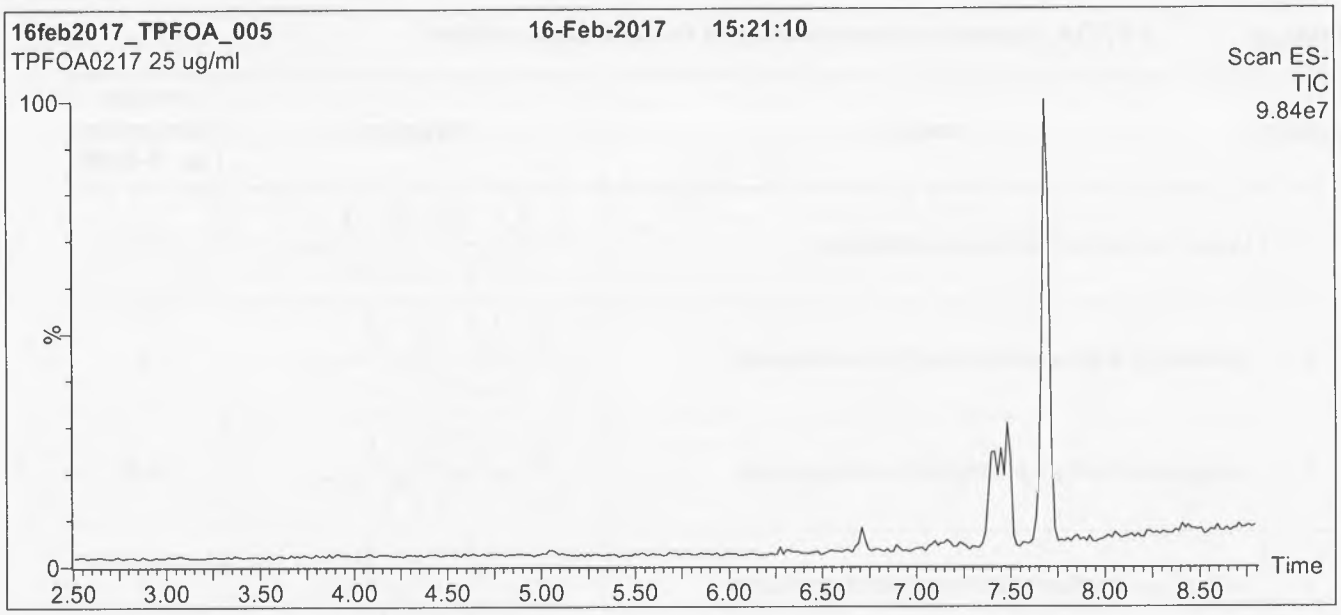
Table A: **T-PFOA; Isomeric Components and Percent Composition***

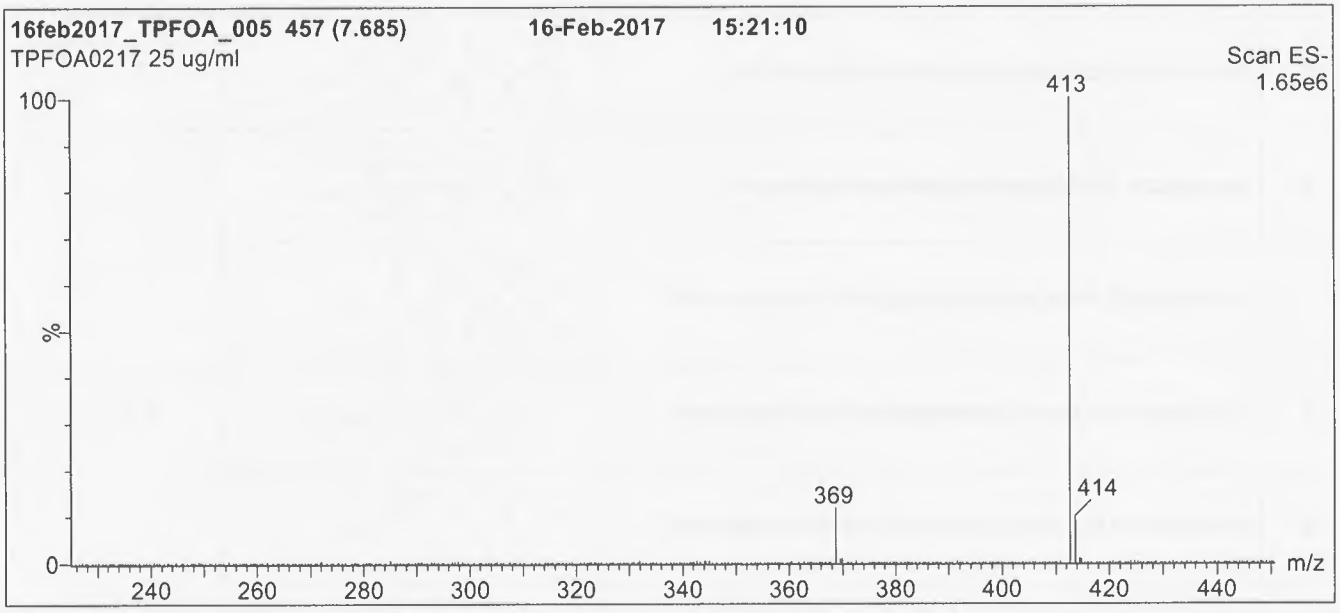
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Linear ammonium perfluoro-n-octanoate		79
2	Ammonium 6-trifluoromethylperfluoroheptanoate		9
3	Ammonium 5-trifluoromethylperfluoroheptanoate		4.5
4	Ammonium 4-trifluoromethylperfluoroheptanoate		4
5	Ammonium 3-trifluoromethylperfluoroheptanoate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

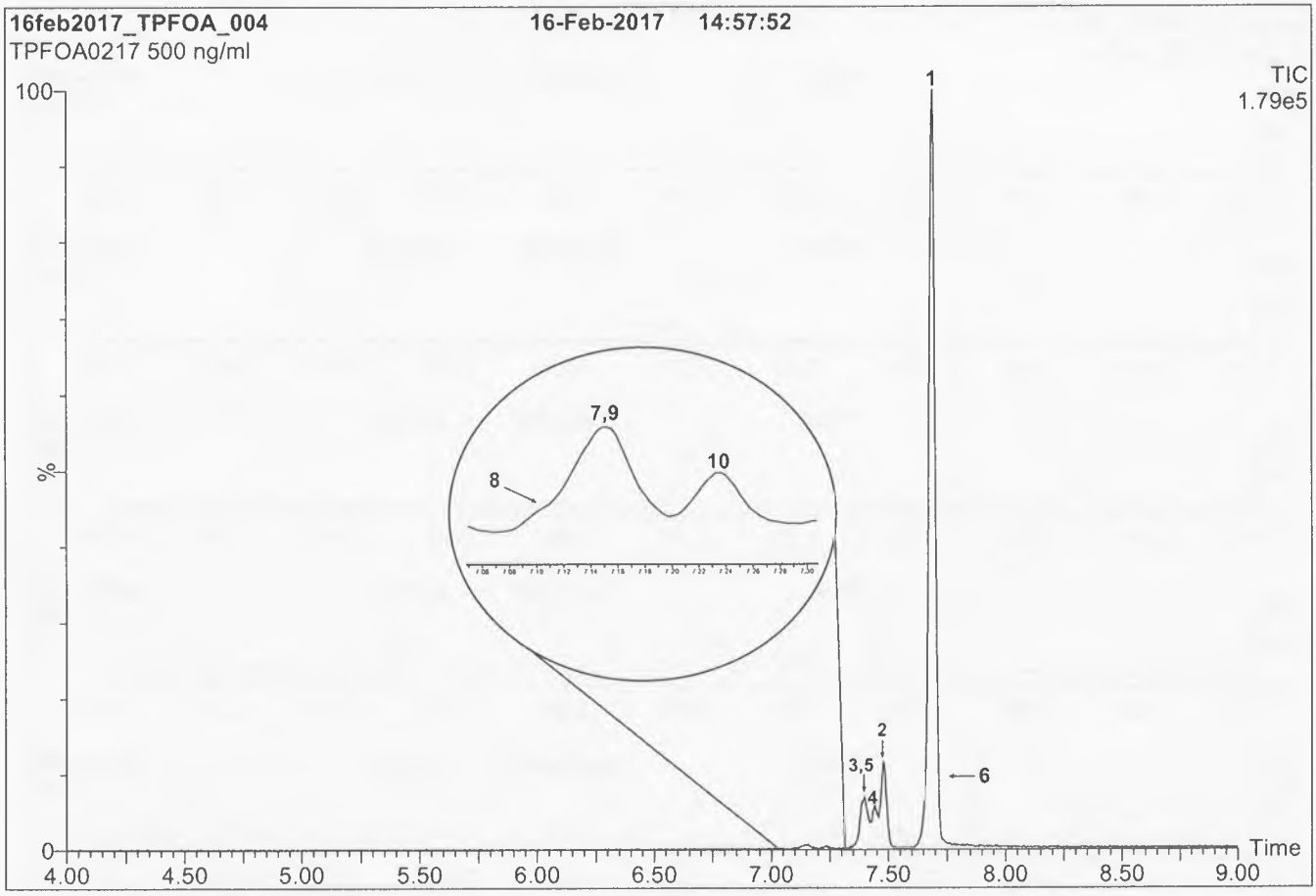
Flow: 1.0 ml/min

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

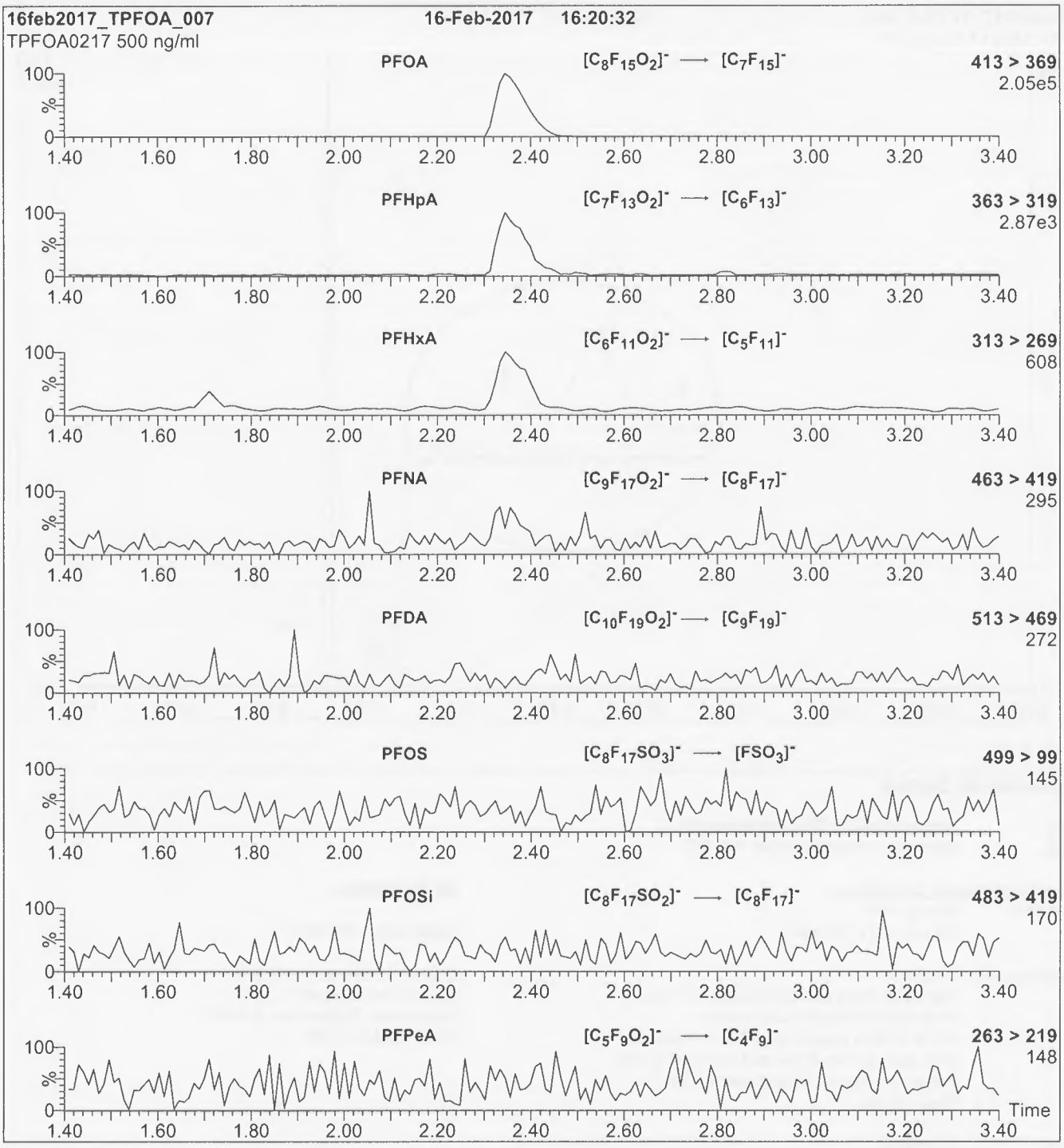
Flow: 1.0 ml/min

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)

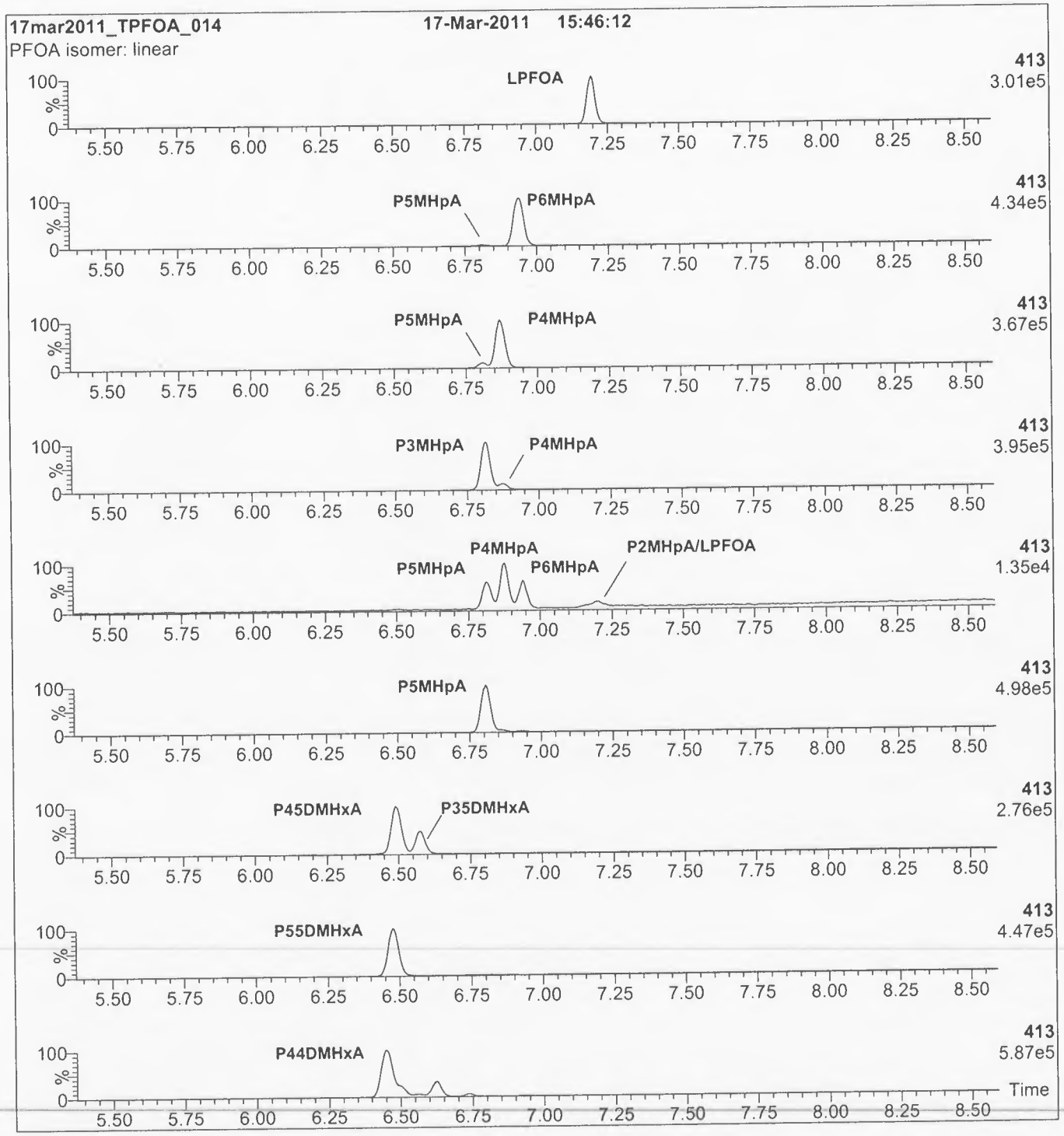
Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

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

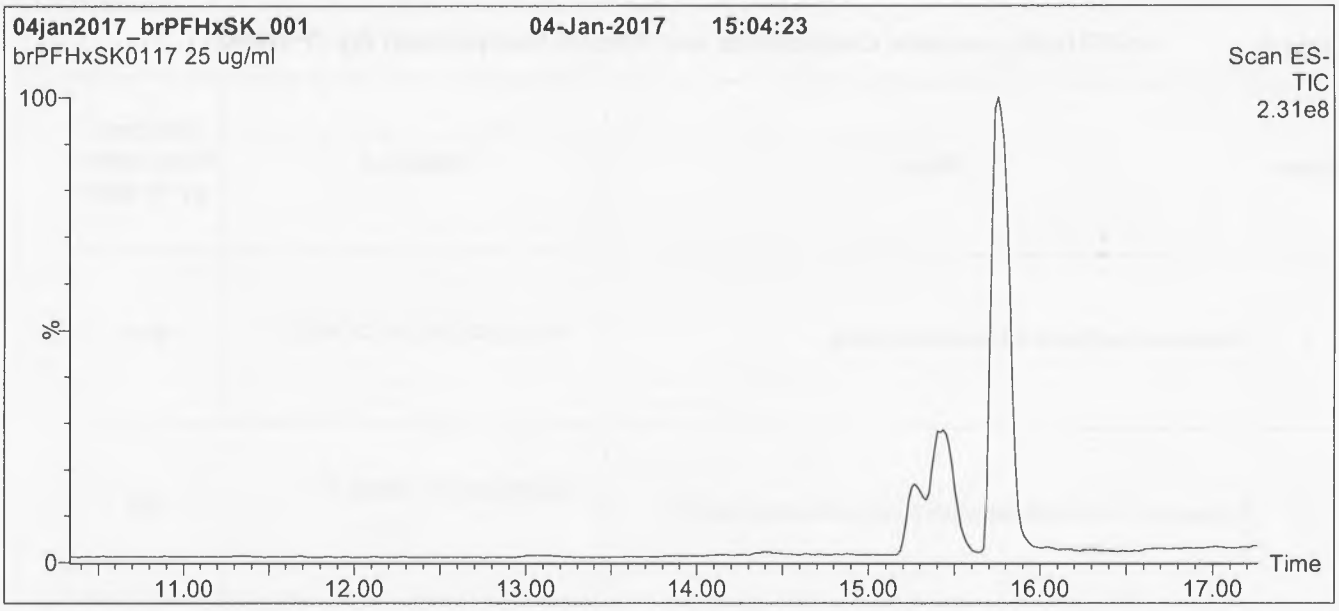
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

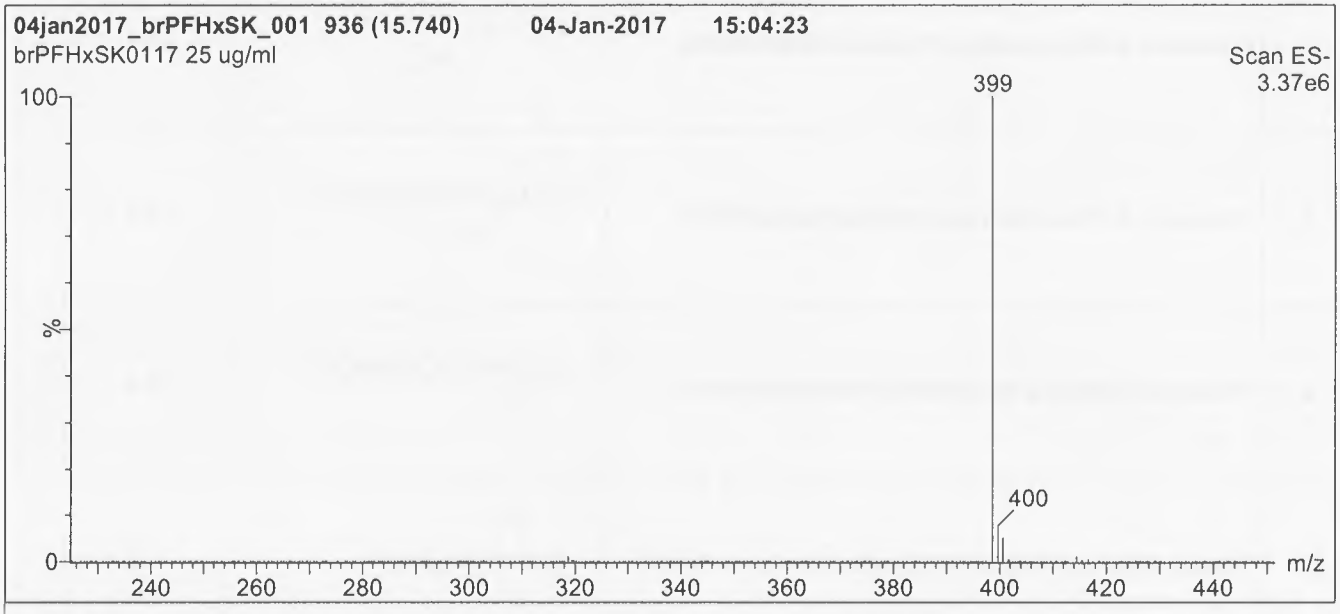
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$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

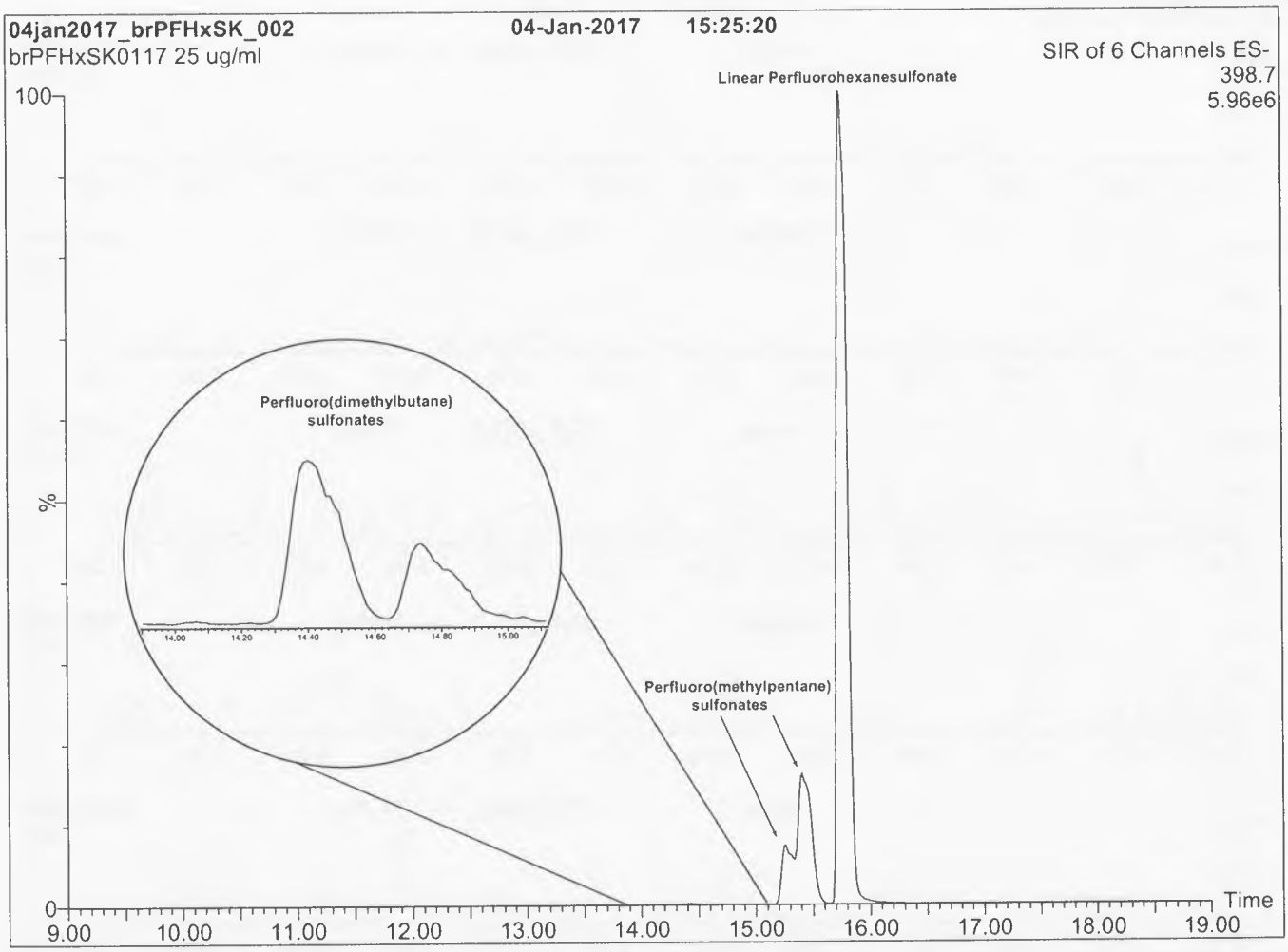
Flow: 300 µl/min

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

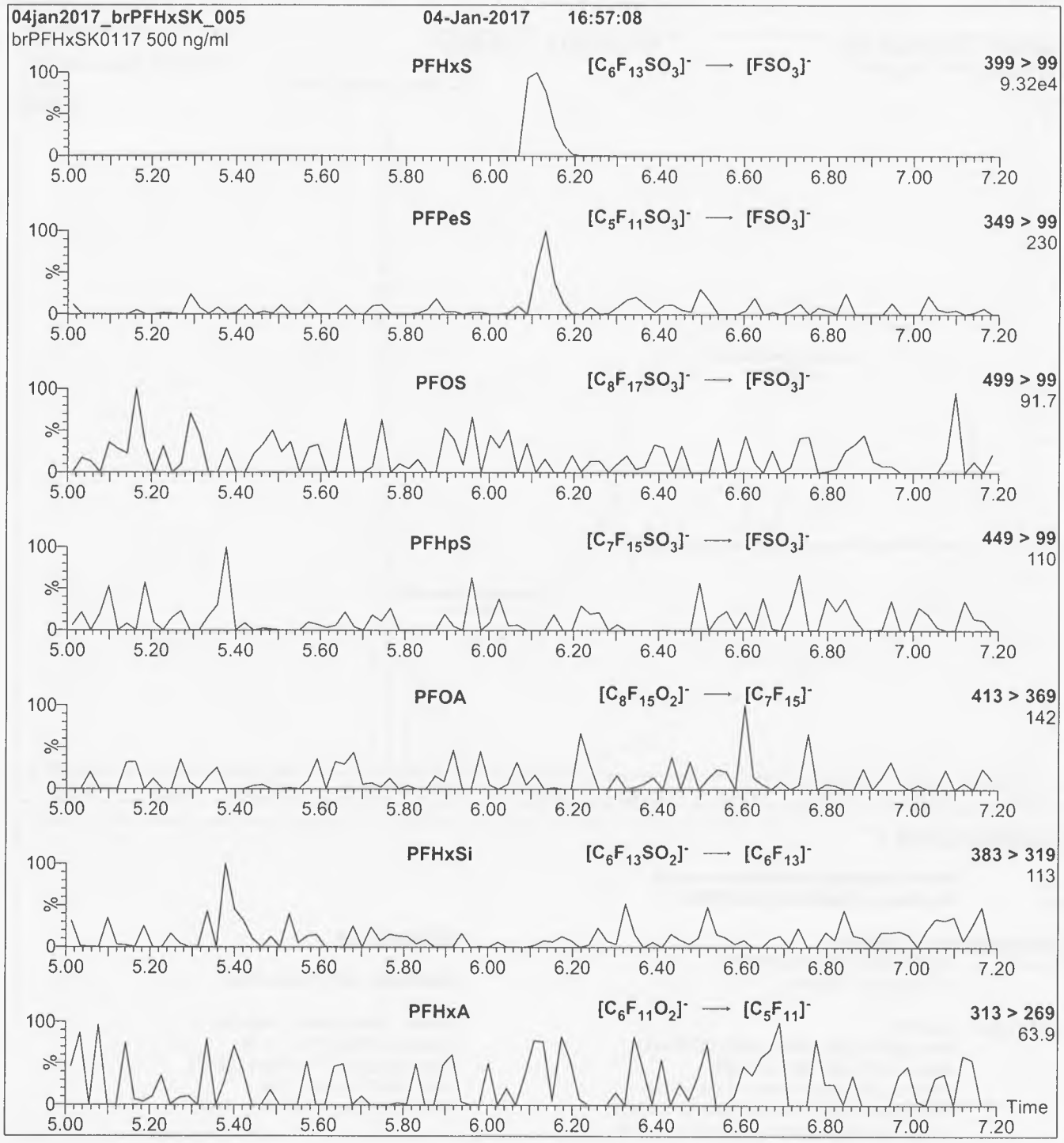
Flow: 300 µl/min

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

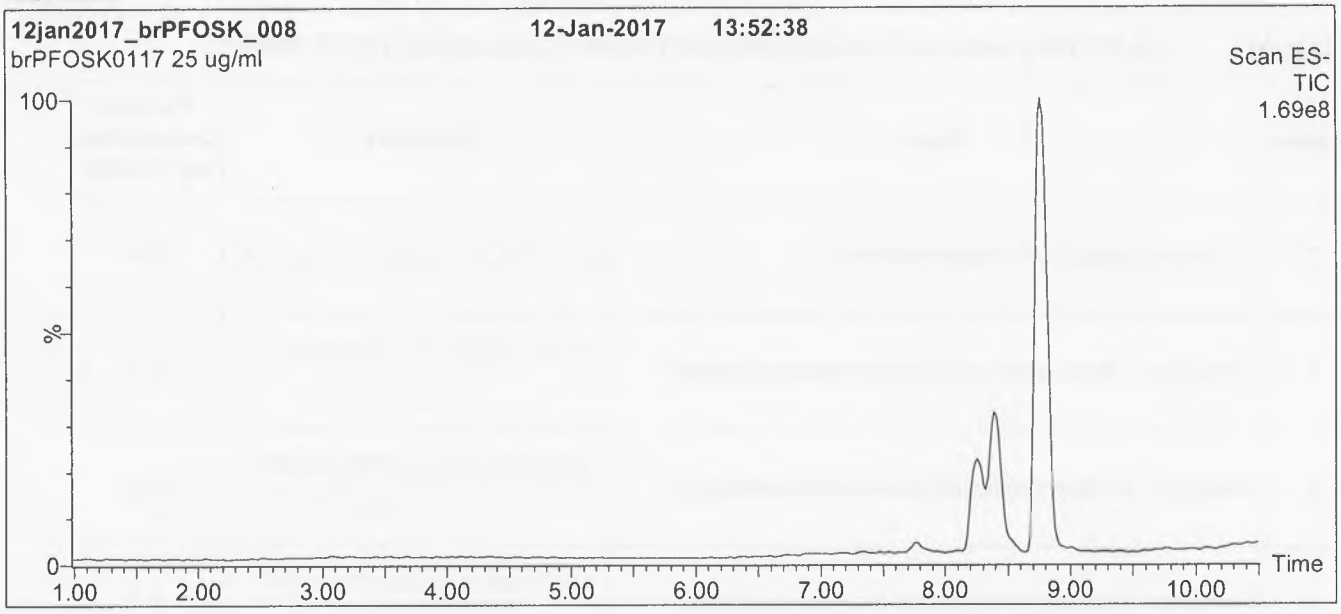
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

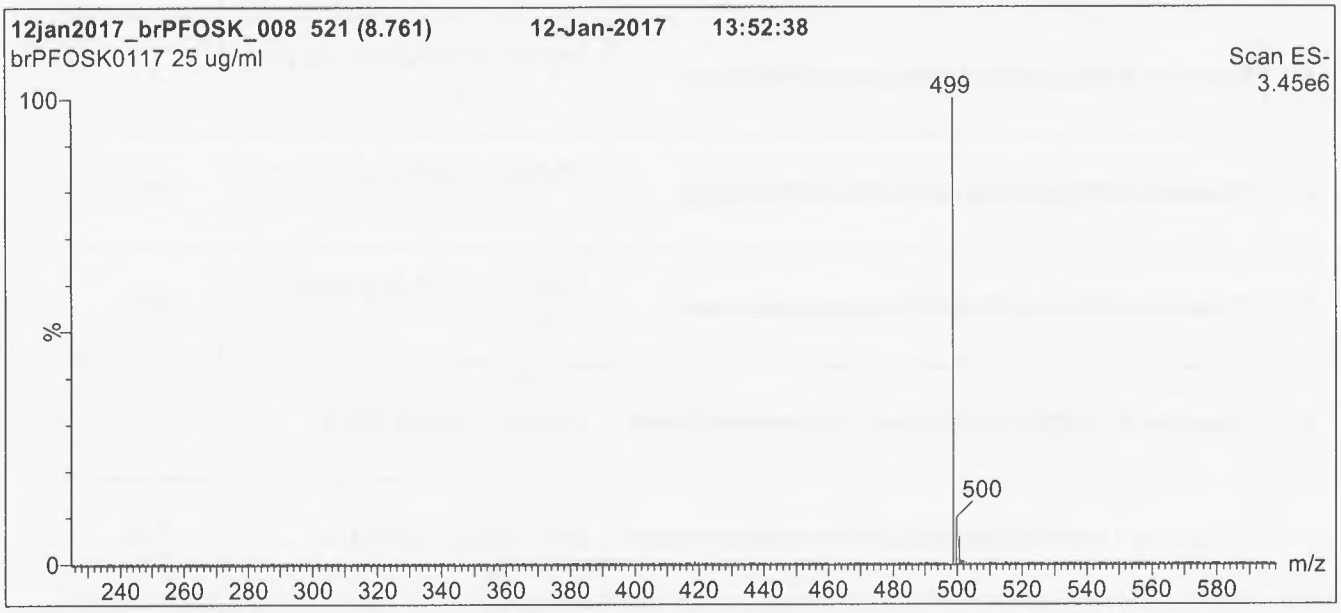
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$	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	$CF_3CF(CF_3)CF_2CF(CF_3)CF_2CF_2SO_3^-K^+$	0.07

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

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

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





Conditions for Figure 1:

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

Chromatographic Conditions

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

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

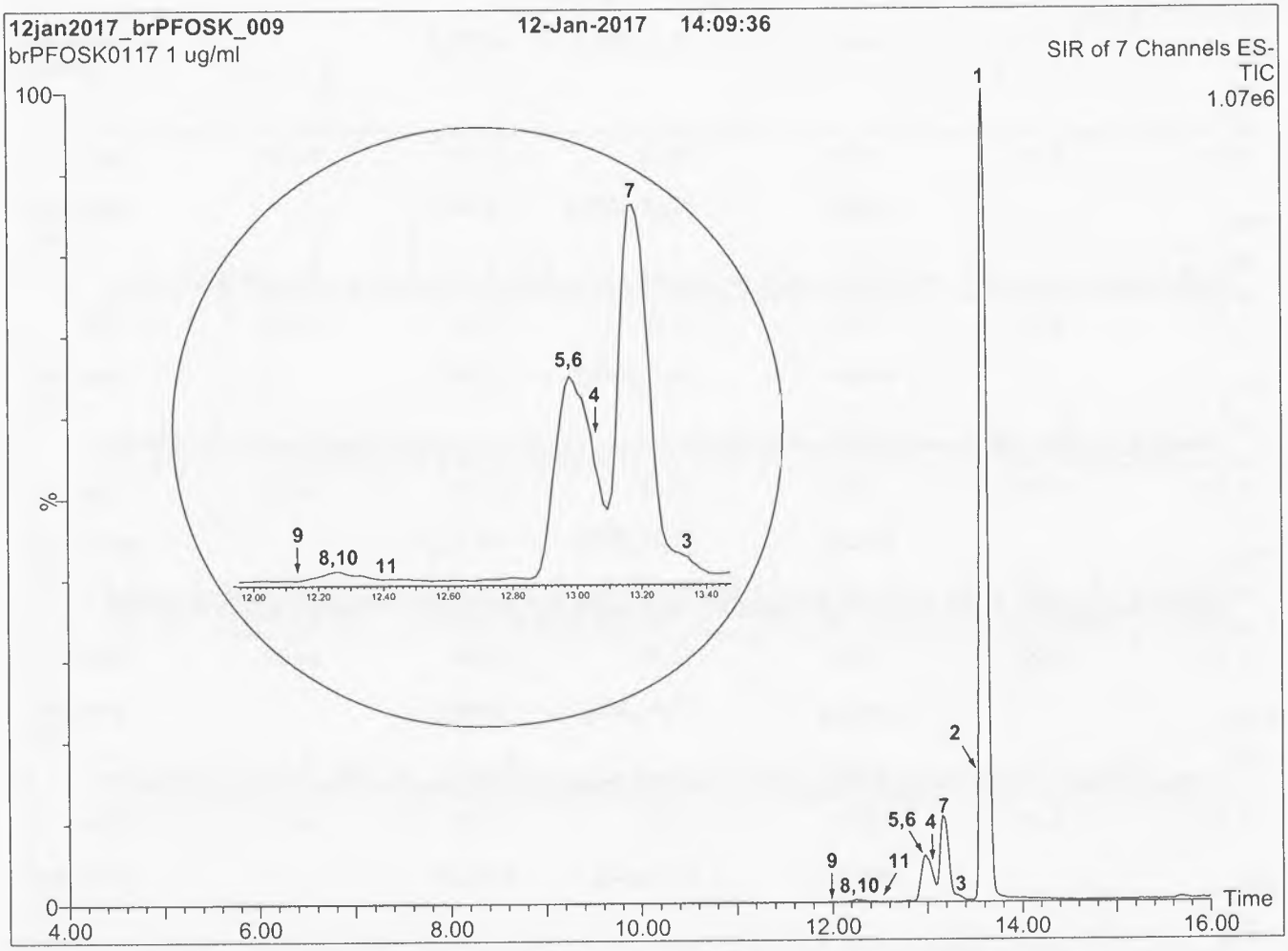
Flow: 300 µl/min

MS Parameters

Experiment: Full Scan (225 - 850 amu)

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

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



Conditions for Figure 2:

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

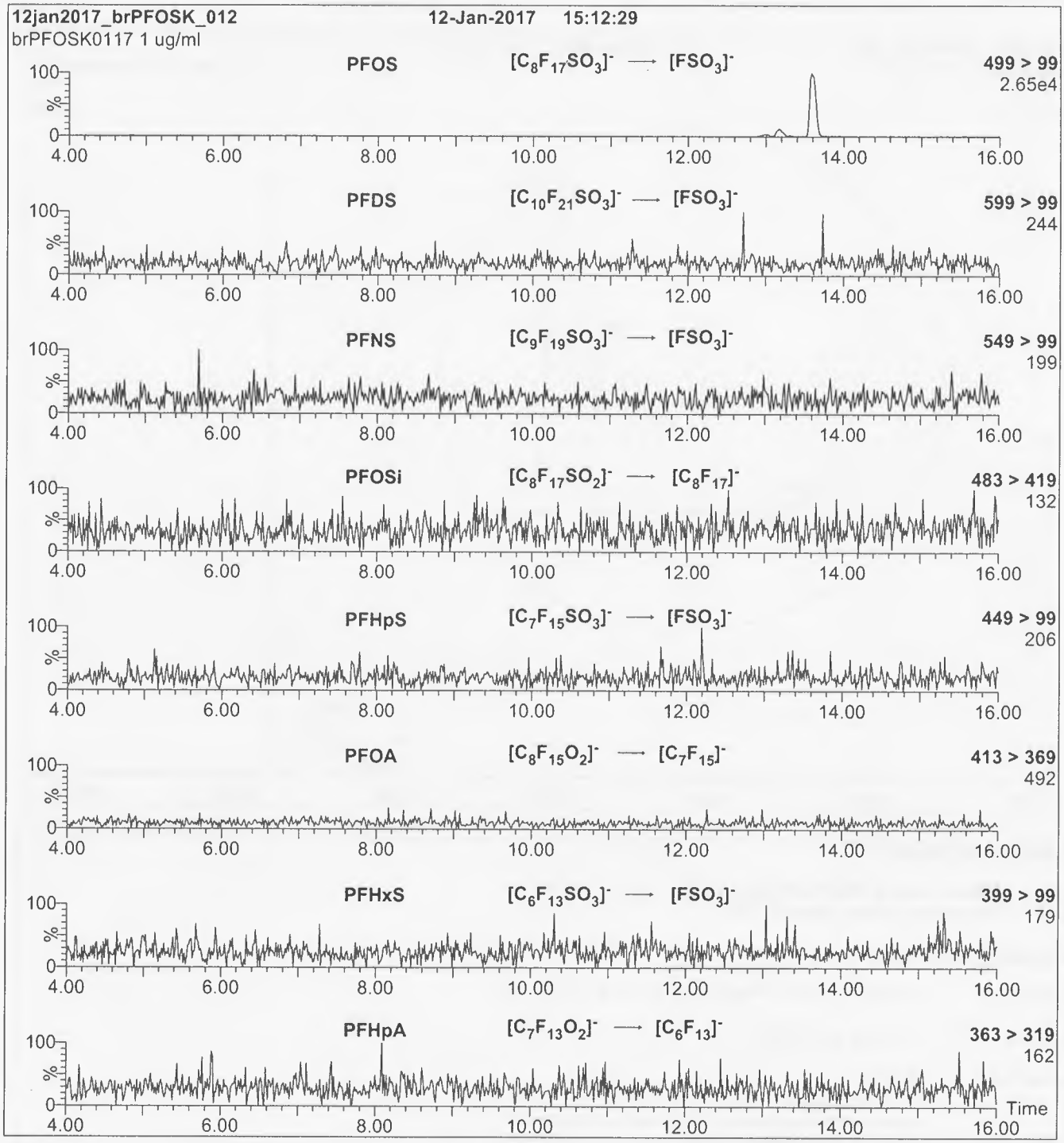
Chromatographic Conditions:

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

MS Conditions:

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

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



Conditions for Figure 3:

Injection: On-column

Mobile phase: Same as Figure 2

Flow: 300 µl/min

MS Parameters

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

CERTIFIED WEIGHT REPORT

180705-02

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

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

5E-05 Balance Uncertainty
0.007 Flask Uncertainty

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

Note: All assigned values are anion concentrations.

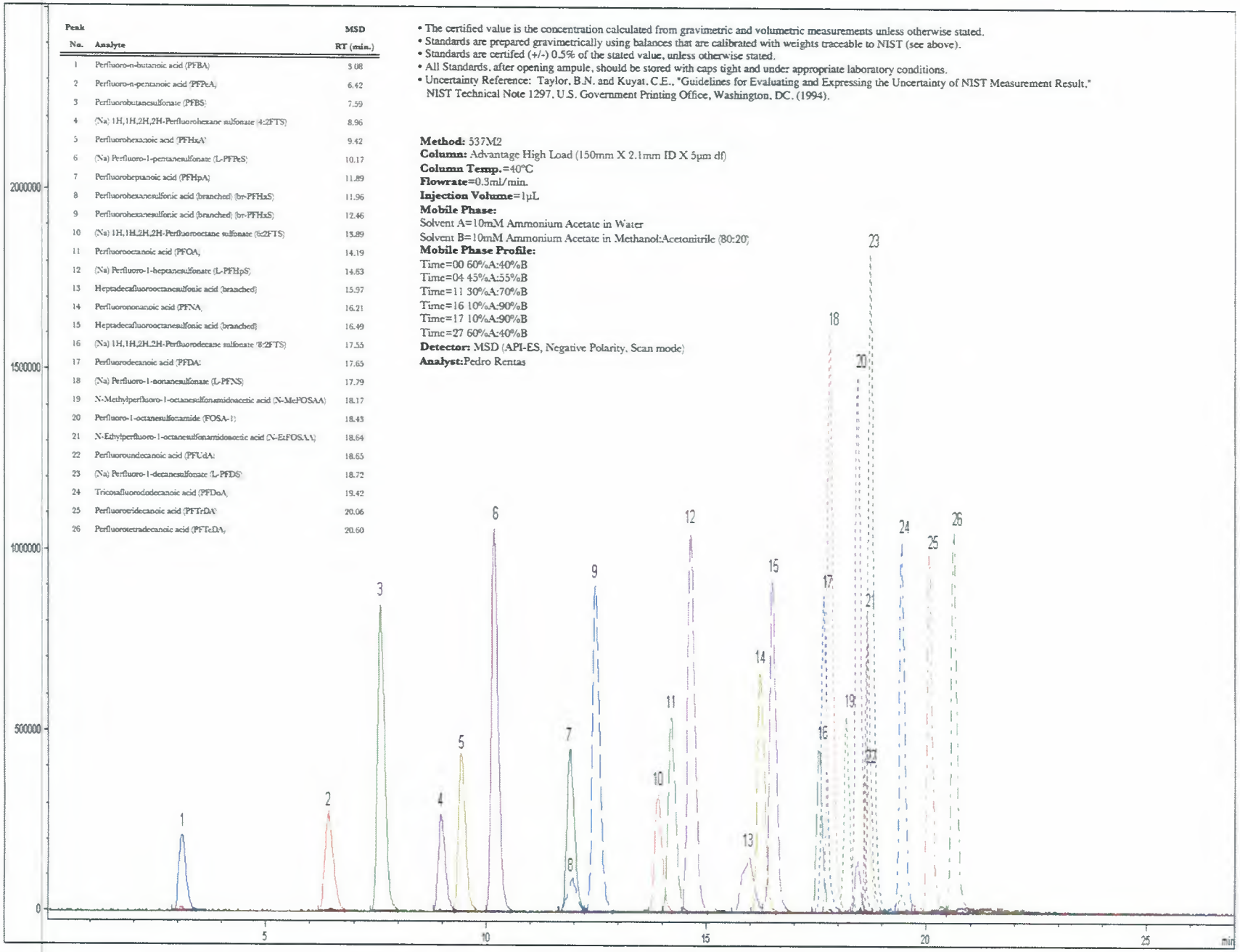
		061918
Formulated By:	Mario Luis	DATE
		061918
Reviewed By:	Pedro L. Rentas	DATE

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

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

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

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



BATTELLE

It can be done

BDO Id: 180726-04

Reagent Receipt Report

Approved: ☑ Authorized ☐

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

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

Total Analytes: 4

Notes:

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

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS
DOCUMENTATION

MPFAC-C-IS

Mass-Labelled Perfluorinated Compound Injection Standards Solution

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

DESCRIPTION:

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

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

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HAZARDS:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

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

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

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

TRACEABILITY:

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

EXPIRY DATE / PERIOD OF VALIDITY:

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

LIMITED WARRANTY:

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

QUALITY MANAGEMENT:

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

CALA Testing Accreditation No. A1226

ANAB ACCREDITED ISO 17025 REFERENCE MATERIAL PRODUCER

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

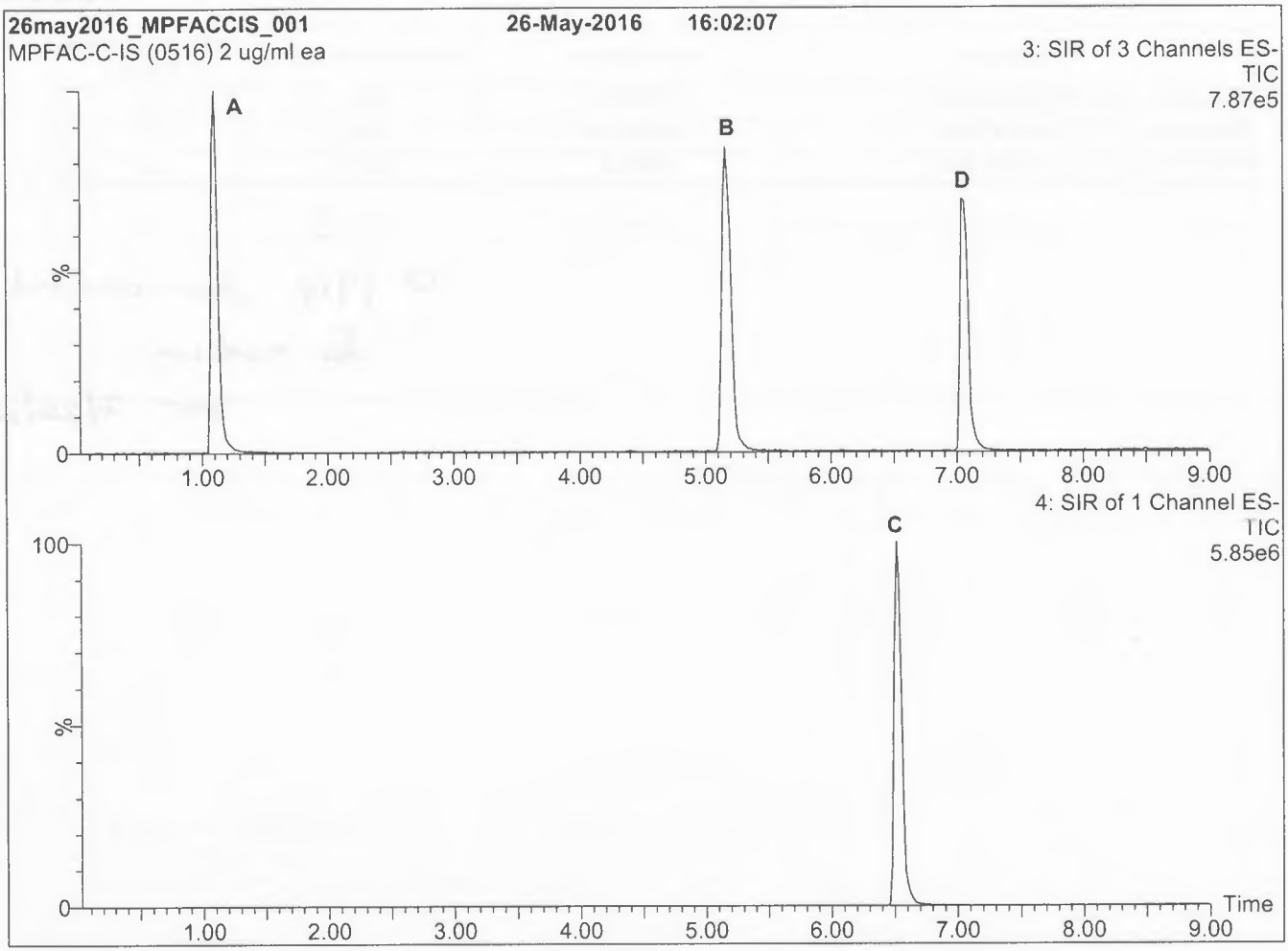
Table A: **MPFAC-C-IS; Components and Concentrations (ng/ml; ± 5% in Methanol / Water (<1%))**

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

① 1914 when corrected for sodium
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

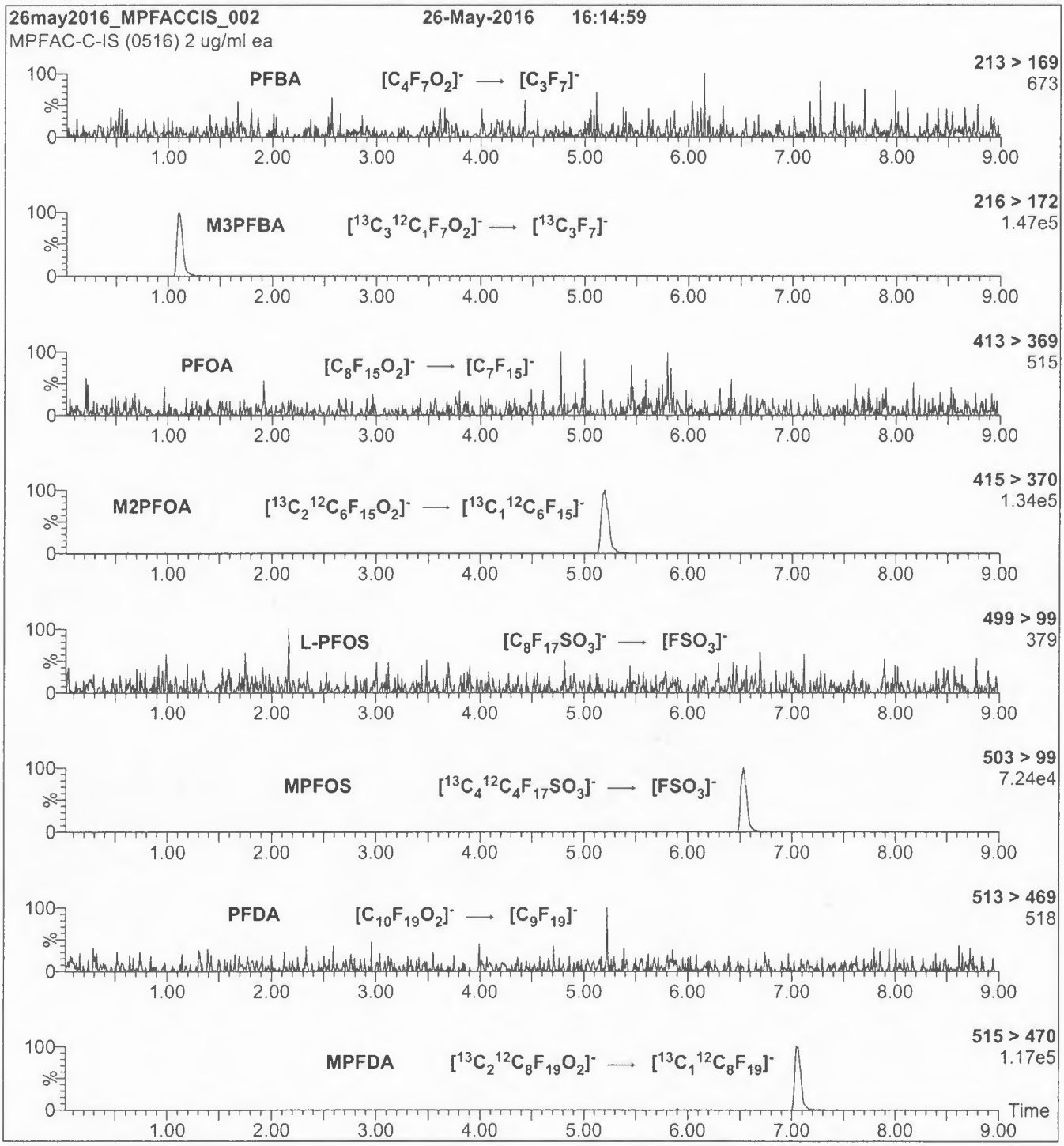
Flow: 300 µl/min

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%))**

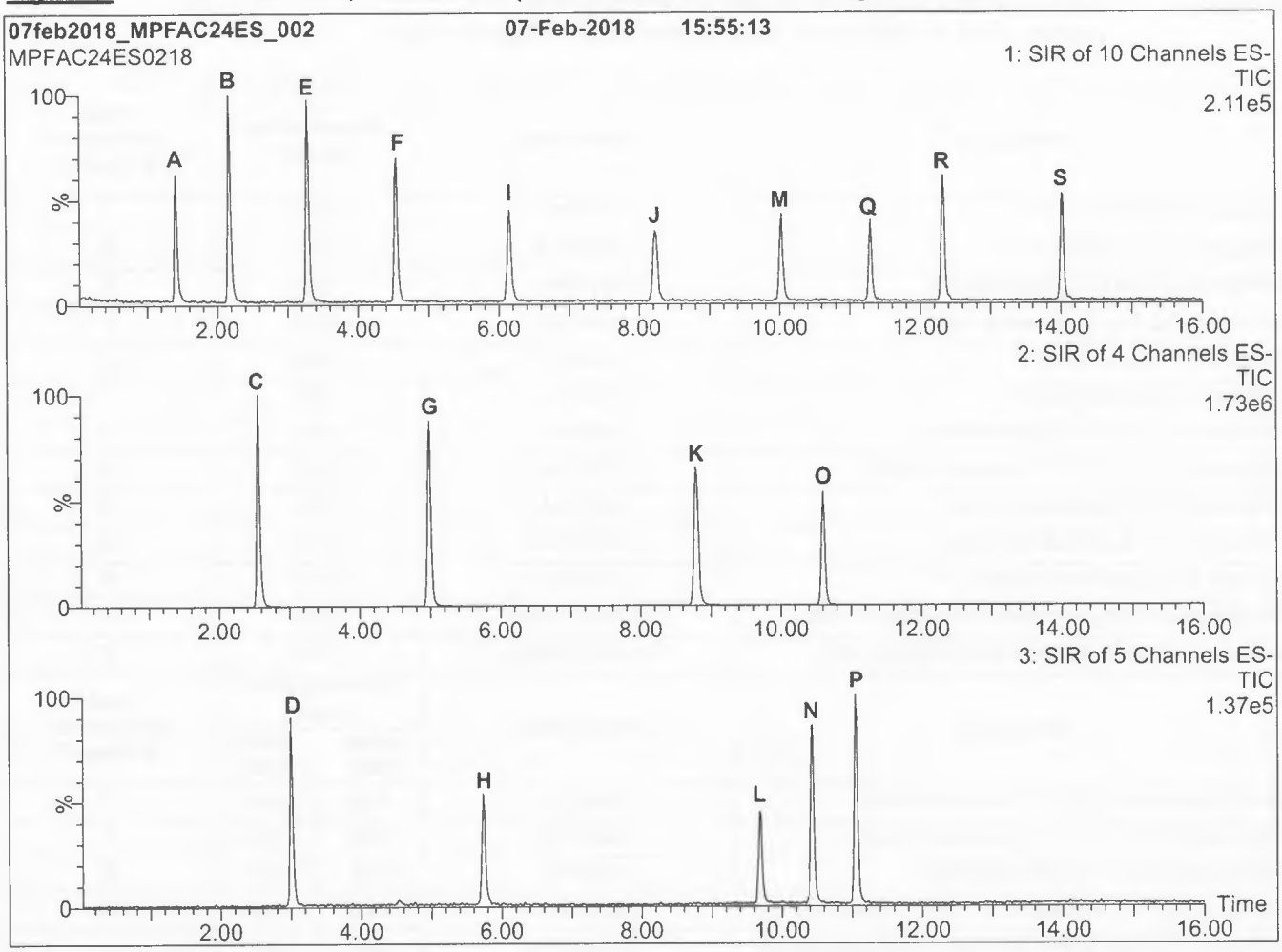
Compound	Abbreviation	Concentration (ng/ml)	Peak Assignment in Figure 1
Perfluoro-n-[$^{13}C_4$]butanoic acid	MPFBA	1000	A
Perfluoro-n-[$^{13}C_5$]pentanoic acid	M5PFPeA	1000	B
Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid	M5PFHxA	1000	E
Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid	M4PFHpA	1000	F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

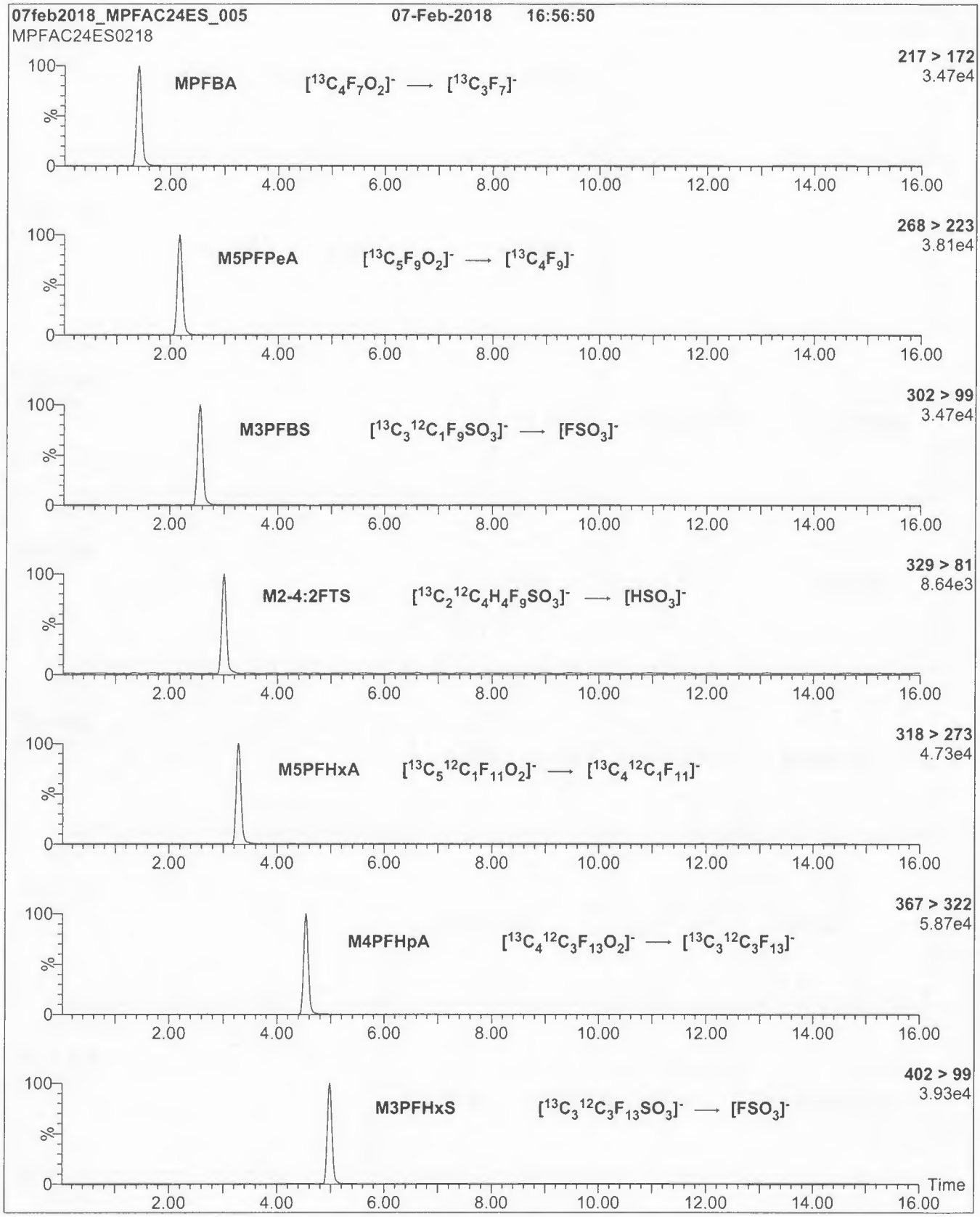


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**

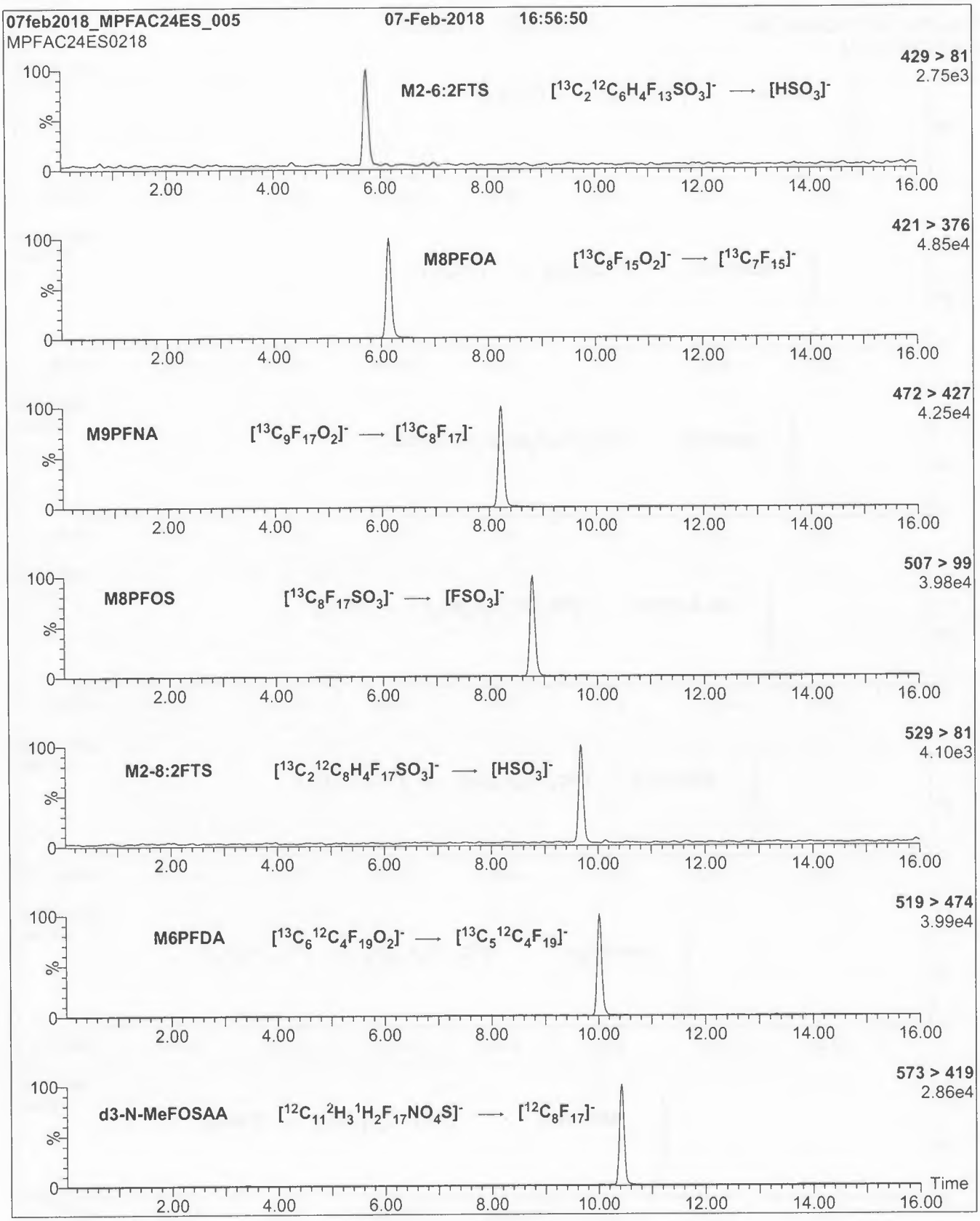
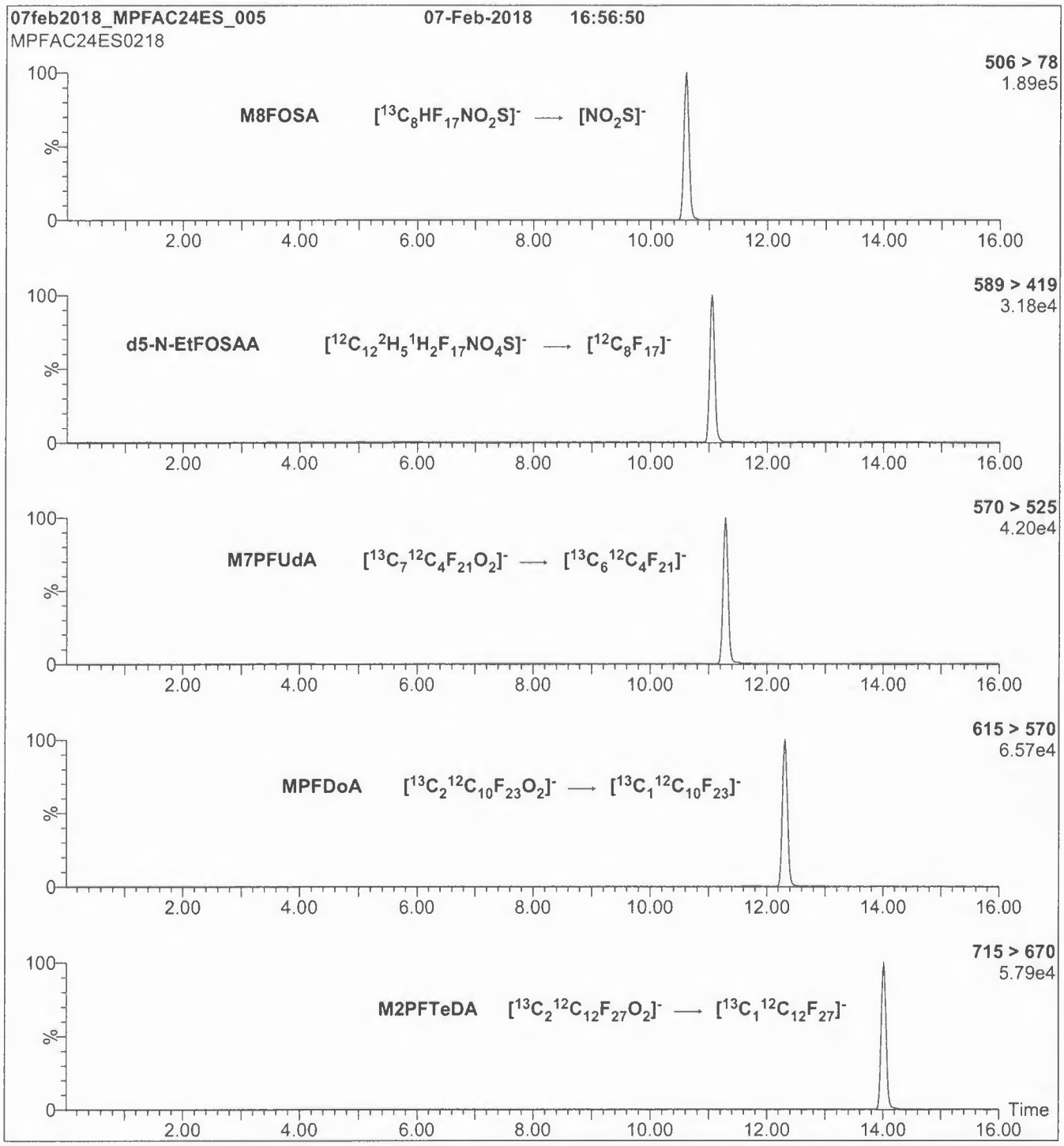


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**



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)

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

Analytical Reference Material ARM

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

CERTIFIED WEIGHT REPORT

181001-01

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	
0.007	Flask Uncertainty	

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

Note: All assigned values are anion concentrations.

Eli Aliaga 092018
Formulated By: Eli Aliaga DATE

Pedro Rentas 092018
Reviewed By: Pedro L. Rentas DATE

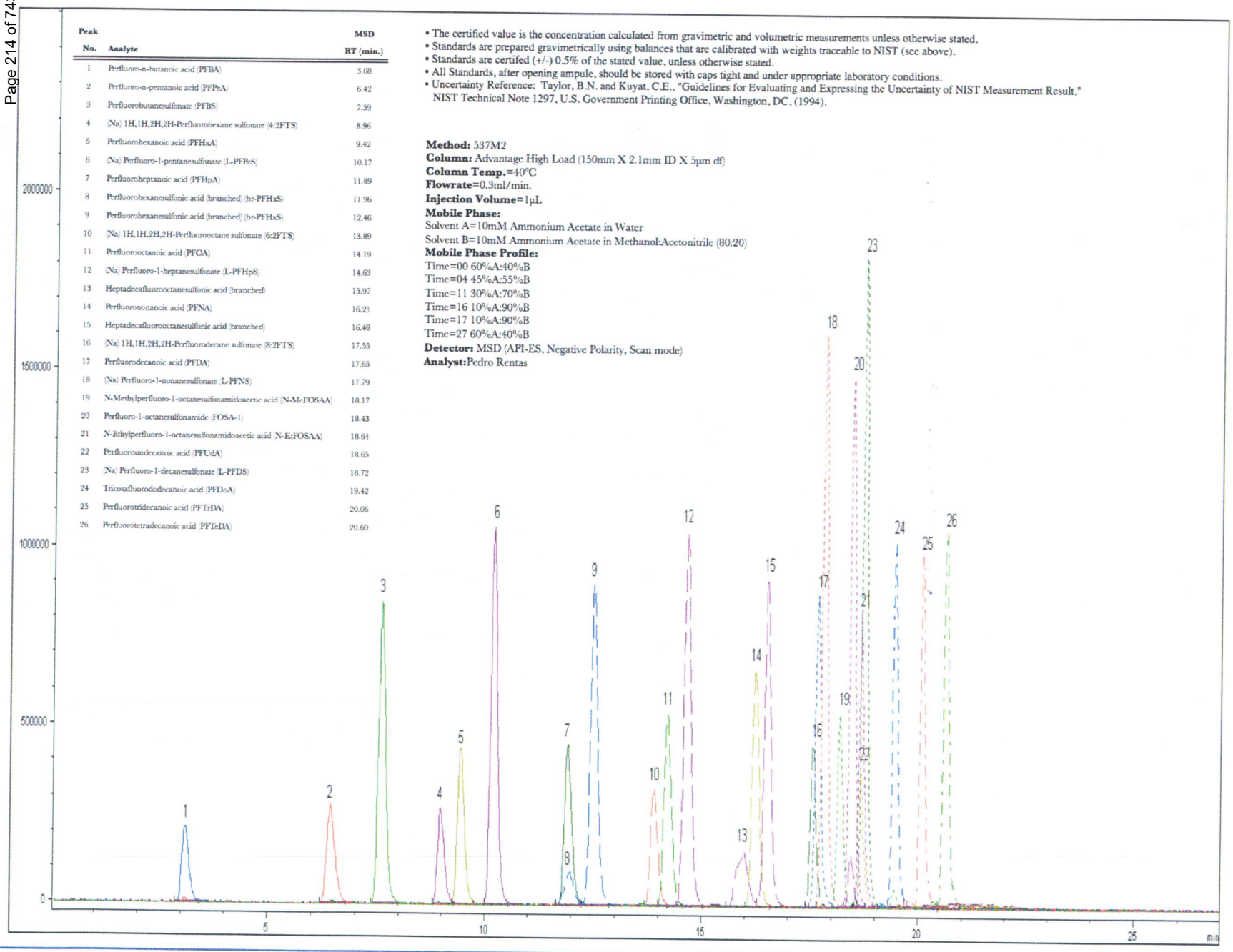
2nd Source

	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



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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:** _____

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

18-0585

CTO-4164: Analysis of Solids

SB, SS

SOP Numbers (see workplan for modifications)

ExtractionSOP No. 5-370

This Batch Contains The Following Samples:			
CR894PB-FS	J8389-FS	J8401-FS	J8407-FS
CR895LCS-FS	J8390-FS	J8402-FS	J8408-FS
J8381-FS	J8391-FS	J8403-FS	J8409-FS
J8386-FS	J8392-FS	J8404-FS	J8410-FS
J8387-FS	J8393MS-FS	J8405-FS	J8411-FS
J8388-FS	J8394MSD-FS	J8406-FS	

Laboratory Preparation Records
COMPLETE AND VALIDATED

Prep Task Leader: Stephanie Schultz

Approved By:	Date	Initials
Denise Schumitz	10/22/2018	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

18-0585

CTO-4164: Analysis of Solids

SB, SS

Sample ID	Description
CR894PB-FS	Procedural Blank - Ottawa Sand (180507-02)
CR895LCS-FS	Laboratory Control Sample - Ottawa Sand (180507-02)
J8381-FS	VC-PM64B-SB03-0506
J8386-FS	VC-HS09-SB01-0102
J8387-FS	VC-HS09-SB01-0506
J8388-FS	VC-HS09-SB02-0102
J8389-FS	VC-HS09-SB02-0506
J8390-FS	VC-HS09-SS03-000H
J8391-FS	VC-HS09-SB03-0102
J8392-FS	VC-HS09-SB03-0506
J8393MS-FS	Matrix Spike of VC-HS09-SB03-0506-MS
J8394MSD-FS	Matrix Spike Duplicate of VC-HS09-SB03-0506-MSD
J8401-FS	VC-HS09-SS01-000H
J8402-FS	VC-HS09-SS02-000H
J8403-FS	VC-AOC16-SS01-000H
J8404-FS	VC-AOC16-SB01-0102
J8405-FS	VC-AOC16-SB01-0506
J8406-FS	VC-AOC16-SS02-000H
J8407-FS	VC-AOC16-SB02-0102
J8408-FS	VC-AOC16-SB02-0506
J8409-FS	VC-AOC16-SS03-000H

Samples Assigned By: Jonathan Thorn Date : September 27, 2018

Comments:

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BATTELLE - NORWELL OPERATIONS
SAMPLE IDENTIFICATION PAGE

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

Project No.(s)
100110125-01

18-0585

CTO-4164: Analysis of Solids

SB, SS

Sample ID	Description
J8410-FS	VC-AOC16-SB03-0102
J8411-FS	VC-AOC16-SB03-0506

Samples Assigned By: Jonathan Thorn Date : September 27, 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

18-0585

CTO-4164: Analysis of Solids

SB, SS

Requested On/By:	09/28/2018 CHB	**Purpose:**	Sample Preparation
Relinquished On/By:	09/28/2018 MDS	**Last Activity:**	Return

Accepted On/By:	09/28/2018 SAS	**Returned On/To:**	09/28/2018 MDS
Stored In Facility:	Sample Preparation	**Returned To Facility:**	Custody: NA
Stored Until	09/28/2018		
Stored Comment:	NA	**Returned Comment:**	NA

No.	BDO-ID:	Ctrs	*	Condition:	Custody Comment:
1	J8381	1	--	Intact	NA
2	J8386	1	--	Intact	NA
3	J8387	1	--	Intact	NA
4	J8388	1	--	Intact	NA
5	J8389	1	--	Intact	NA
6	J8390	1	--	Intact	NA
7	J8391	1	--	Intact	NA
8	J8392	1	--	Intact	NA
9	J8401	1	--	Intact	NA
10	J8402	1	--	Intact	NA
11	J8403	1	--	Intact	NA
12	J8404	1	--	Intact	NA
13	J8405	1	--	Intact	NA
14	J8406	1	--	Intact	NA
15	J8407	1	--	Intact	NA
16	J8408	1	--	Intact	NA
17	J8409	1	--	Intact	NA
18	J8410	1	--	Intact	NA
19	J8411	1	--	Intact	NA

Total Samples 19 * "C" = Consumed Container

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

18-0585

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)
CR894PB-FS	NA	--	NA	NA	NA	2.05	100.00	0.00	2.05
CR895LCS-FS	NA	--	NA	NA	NA	2.00	100.00	0.00	2.00
J8381-FS	1	--	1.10	7.16	6.55	2.02	89.93	10.07	1.82
J8386-FS	1	--	1.12	7.92	7.45	2.00	93.09	6.91	1.86
J8387-FS	1	--	1.10	6.52	5.85	2.01	87.64	12.36	1.76
J8388-FS	1	--	1.12	7.16	6.72	2.06	92.72	7.28	1.91
J8389-FS	1	--	1.11	6.32	5.41	2.06	82.53	17.47	1.70
J8390-FS	1	--	1.08	6.68	5.99	2.03	87.68	12.32	1.78
J8391-FS	1	--	1.12	6.86	6.17	2.06	87.98	12.02	1.81
J8392-FS	1	--	1.07	10.53	8.74	2.05	81.08	18.92	1.66
J8393MS-FS	1	--	1.12	8.04	6.78	2.00	81.79	18.21	1.64
J8394MSD-FS	1	--	1.12	7.64	6.41	2.07	81.13	18.87	1.68
J8401-FS	1	--	1.06	7.86	7.52	2.04	95.00	5.00	1.94
J8402-FS	1	--	1.08	6.31	5.85	2.01	91.20	8.80	1.83
J8403-FS	1	--	1.07	6.37	5.82	2.06	89.62	10.38	1.85
J8404-FS	1	--	1.13	6.82	6.11	2.00	87.52	12.48	1.75
J8405-FS	1	--	1.09	7.51	6.15	2.01	78.82	21.18	1.58
J8406-FS	1	--	1.04	7.87	7.18	2.00	89.90	10.10	1.80
J8407-FS	1	--	1.07	8.35	7.64	2.03	90.25	9.75	1.83
J8408-FS	1	--	1.07	9.94	8.23	2.02	80.72	19.28	1.63
J8409-FS	1	--	1.07	7.21	6.61	2.01	90.23	9.77	1.81
J8410-FS	1	--	1.12	8.59	7.72	2.06	88.35	11.65	1.82
J8411-FS	1	--	1.13	8.07	6.71	2.04	80.40	19.60	1.64

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

18-0585

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)

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

18-0585

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:
CR894PB-FS	10/02/2018 KB	BAL-015
CR895LCS-FS	10/02/2018 KB	BAL-015
J8381-FS	09/28/2018 CHB	BAL-009
J8386-FS	09/28/2018 CHB	BAL-009
J8387-FS	09/28/2018 CHB	BAL-009
J8388-FS	09/28/2018 CHB	BAL-009
J8389-FS	09/28/2018 CHB	BAL-009
J8390-FS	09/28/2018 CHB	BAL-009
J8391-FS	09/28/2018 CHB	BAL-009
J8392-FS	09/28/2018 CHB	BAL-009
J8393MS-FS	09/28/2018 CHB	BAL-009
J8394MSD-FS	09/28/2018 CHB	BAL-009
J8401-FS	09/28/2018 CHB	BAL-009
J8402-FS	09/28/2018 CHB	BAL-009
J8403-FS	09/28/2018 CHB	BAL-009
J8404-FS	09/28/2018 CHB	BAL-009
J8405-FS	09/28/2018 CHB	BAL-009
J8406-FS	09/28/2018 CHB	BAL-009
J8407-FS	09/28/2018 CHB	BAL-009
J8408-FS	09/28/2018 CHB	BAL-009
J8409-FS	09/28/2018 CHB	BAL-009
J8410-FS	09/28/2018 CHB	BAL-009
J8411-FS	09/28/2018 CHB	BAL-009

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

18-0585

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:
CR894PB-FS	--	--
CR895LCS-FS	--	--
J8381-FS	09/28/2018 CHB	BAL-009
J8386-FS	09/28/2018 CHB	BAL-009
J8387-FS	09/28/2018 CHB	BAL-009
J8388-FS	09/28/2018 CHB	BAL-009
J8389-FS	09/28/2018 CHB	BAL-009
J8390-FS	09/28/2018 CHB	BAL-009
J8391-FS	09/28/2018 CHB	BAL-009
J8392-FS	09/28/2018 CHB	BAL-009
J8393MS-FS	09/28/2018 CHB	BAL-009
J8394MSD-FS	09/28/2018 CHB	BAL-009
J8401-FS	09/28/2018 CHB	BAL-009
J8402-FS	09/28/2018 CHB	BAL-009
J8403-FS	09/28/2018 CHB	BAL-009
J8404-FS	09/28/2018 CHB	BAL-009
J8405-FS	09/28/2018 CHB	BAL-009
J8406-FS	09/28/2018 CHB	BAL-009
J8407-FS	09/28/2018 CHB	BAL-009
J8408-FS	09/28/2018 CHB	BAL-009
J8409-FS	09/28/2018 CHB	BAL-009
J8410-FS	09/28/2018 CHB	BAL-009
J8411-FS	09/28/2018 CHB	BAL-009

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

18-0585

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:
CR894PB-FS	--	--
CR895LCS-FS	--	--
J8381-FS	09/28/2018 CHB	BAL-009
J8386-FS	09/28/2018 CHB	BAL-009
J8387-FS	09/28/2018 CHB	BAL-009
J8388-FS	09/28/2018 CHB	BAL-009
J8389-FS	09/28/2018 CHB	BAL-009
J8390-FS	09/28/2018 CHB	BAL-009
J8391-FS	09/28/2018 CHB	BAL-009
J8392-FS	09/28/2018 CHB	BAL-009
J8393MS-FS	09/28/2018 CHB	BAL-009
J8394MSD-FS	09/28/2018 CHB	BAL-009
J8401-FS	09/28/2018 CHB	BAL-009
J8402-FS	09/28/2018 CHB	BAL-009
J8403-FS	09/28/2018 CHB	BAL-009
J8404-FS	09/28/2018 CHB	BAL-009
J8405-FS	09/28/2018 CHB	BAL-009
J8406-FS	09/28/2018 CHB	BAL-009
J8407-FS	09/28/2018 CHB	BAL-009
J8408-FS	09/28/2018 CHB	BAL-009
J8409-FS	09/28/2018 CHB	BAL-009
J8410-FS	09/28/2018 CHB	BAL-009
J8411-FS	09/28/2018 CHB	BAL-009

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

18-0585

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:
CR894PB-FS	--	--
CR895LCS-FS	--	--
J8381-FS	10/01/2018 KB	BAL-015
J8386-FS	10/01/2018 KB	BAL-015
J8387-FS	10/01/2018 KB	BAL-015
J8388-FS	10/01/2018 KB	BAL-015
J8389-FS	10/01/2018 KB	BAL-015
J8390-FS	10/01/2018 KB	BAL-015
J8391-FS	10/01/2018 KB	BAL-015
J8392-FS	10/01/2018 KB	BAL-015
J8393MS-FS	10/01/2018 KB	BAL-015
J8394MSD-FS	10/01/2018 KB	BAL-015
J8401-FS	10/01/2018 KB	BAL-015
J8402-FS	10/01/2018 KB	BAL-015
J8403-FS	10/01/2018 KB	BAL-015
J8404-FS	10/01/2018 KB	BAL-015
J8405-FS	10/01/2018 KB	BAL-015
J8406-FS	10/01/2018 KB	BAL-015
J8407-FS	10/01/2018 KB	BAL-015
J8408-FS	10/01/2018 KB	BAL-015
J8409-FS	10/01/2018 KB	BAL-015
J8410-FS	10/01/2018 KB	BAL-015
J8411-FS	10/01/2018 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
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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

18-0585

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
CR894PB-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
CR895LCS-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
CR895LCS-FS	KB83	LCS/MS	1	150	10/02/18 SAS	KB	NA
J8381-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8386-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8387-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8388-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8389-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8390-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8391-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8392-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8393MS-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8393MS-FS	KB83	LCS/MS	1	350	10/02/18 SAS	KB	NA
J8394MSD-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8394MSD-FS	KB83	LCS/MS	1	350	10/02/18 SAS	KB	NA
J8401-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8402-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8403-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8404-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8405-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8406-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8407-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8408-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8409-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8410-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8411-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
SURROGATE SPIKE FORM

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

Project No.(s)
100110125-01

18-0585

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

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JY27	Pipette	B814659662
KB83	Pipette	B814657482
KB83	Pipette	B820865811

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
SAMPLE EXTRACTION FORM

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

Project No.(s)
100110125-01

18-0585

CTO-4164: Analysis of Solids

SB, SS

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CR894PB-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
CR895LCS-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8381-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8386-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8387-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8388-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8389-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8390-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8391-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8392-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8393MS-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8394MSD-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8401-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8402-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8403-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8404-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8405-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8406-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8407-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8408-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8409-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8410-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8411-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
SAMPLE EXTRACTION FORM

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

Project No.(s)
100110125-01

18-0585

CTO-4164: Analysis of Solids

SB, SS

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment

Solvents/Reagent Preparations:

Name	ID	Expires	Lot No	Procedure	Comments
0.4% NH3 in Methanol	RP-181002-1	10/02/18	SHBJ0412	Per 100 mL, 3.5 mL ammonia solution brought to 100 mL with methanol	
0.4% NH3 in Methanol	RP-181002-1	10/02/18	182674	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

18-0585

CTO-4164: Analysis of Solids

SB, SS

Extract Id	Date	Init.	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comments
CR894PB-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
CR895LCS-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8381-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8386-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8387-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8388-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8389-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8390-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8391-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8392-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8393MS-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8394MSD-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8401-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8402-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8403-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8404-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8405-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8406-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8407-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8408-FS(3)	10/04/18	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

18-0585

CTO-4164: Analysis of Solids

SB, SS

Extract Id	Date	Init.	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comments
J8409-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8410-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8411-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA

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

Elution Volume: 10 mL

Solvents

Reagents

Reagent Prep	Weight g	Name	Expires	Lot No	Procedure
RP-181004-4	Not Measured	0.4% NH3 in Methanol	10/04/18	SHBJ0412	Per 100 mL, 3.5 mL am brought to 100 mL with
RP-181004-4	Not Measured	0.4% NH3 in Methanol	10/04/18	183857	Per 100 mL, 3.5 mL am brought to 100 mL with
RP-181004-9	0.50	ENVI-CARB SPE	10/05/18	10215411	Rinse SPE cartridge wi

Fractions

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BATTELLE - NORWELL OPERATIONS
INTERNAL STANDARD SPIKING FORM

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

Project No.(s)
100110125-01

18-0585

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
CR894PB-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
CR895LCS-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8381-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8386-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8387-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8388-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8389-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8390-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8391-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8392-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8393MS-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8394MSD-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8401-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8402-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8403-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8403-FS-D(5)	955	45	KC03	50	1	1000	100.000	10/12/18 SAS	KB
J8404-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8404-FS-D(5)	970	30	KC03	50	1	1000	25.000	10/12/18 SAS	KB
J8404-FS-D(7)	960	40	KC03	50	1	1000	50.000	10/12/18 SAS	KB

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

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

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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

18-0585

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
J8405-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8406-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8406-FS-D(5)	953	47	KC03	50	1	1000	166.667	10/12/18 SAS	KB
J8407-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8407-FS-D(5)	975	25	KC03	50	1	1000	20.000	10/12/18 SAS	KB
J8407-FS-D(7)	954	46	KC03	50	1	1000	125.000	10/12/18 SAS	KB
J8408-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8409-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8409-FS-D(5)	954	46	KC03	50	1	1000	125.000	10/12/18 SAS	KB
J8410-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS
J8410-FS-D(5)	954	46	KC03	50	1	1000	125.000	10/12/18 SAS	KB
J8411-FS(3)	950	50	KC03	50	1	1000	10.000	10/10/18 SAS	DMS

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.

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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

18-0585

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
J8403-FS-D(5)	100	KB72	SIS	1	45	0	0	10/12/18 SAS	KB
J8404-FS-D(5)	25	KB72	SIS	1	30	0	0	10/12/18 SAS	KB
J8404-FS-D(7)	50	KB72	SIS	1	40	0	0	10/12/18 SAS	KB
J8406-FS-D(5)	166.667	KB72	SIS	1	47	0	0	10/12/18 SAS	KB
J8407-FS-D(5)	20	KB72	SIS	1	25	0	0	10/12/18 SAS	KB
J8407-FS-D(7)	125	KB72	SIS	1	46	0	0	10/12/18 SAS	KB
J8409-FS-D(5)	125	KB72	SIS	1	46	0	0	10/12/18 SAS	KB
J8410-FS-D(5)	125	KB72	SIS	1	46	0	0	10/12/18 SAS	KB

Syringes/Pipettes Used:

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

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BATTELLE - NORWELL OPERATIONS
PREPARATION EXTRACT SPLIT FORM

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

Project No.(s)
100110125-01

18-0585

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	#					
CR894PB-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
CR894PB-FS	2	--	10/4/2018 6:17:00 PM	CR894PB-FS	0	10000	9000	1.111	1.111	10/04/18 KB
CR894PB-FS	3	--	10/4/2018 6:17:00 PM	CR894PB-FS	0	10000	1000	10.000	10.000	10/04/18 KB
CR895LCS-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
CR895LCS-FS	2	--	10/4/2018 6:17:00 PM	CR895LCS-FS	0	10000	9000	1.111	1.111	10/04/18 KB
CR895LCS-FS	3	--	10/4/2018 6:17:00 PM	CR895LCS-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8381-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8381-FS	2	--	10/4/2018 6:17:00 PM	J8381-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8381-FS	3	--	10/4/2018 6:17:00 PM	J8381-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8386-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8386-FS	2	--	10/4/2018 6:17:00 PM	J8386-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8386-FS	3	--	10/4/2018 6:17:00 PM	J8386-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8387-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8387-FS	2	--	10/4/2018 6:17:00 PM	J8387-FS	0	10000	9000	1.111	1.111	10/04/18 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

18-0585

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	#					
J8387-FS	3	--	10/4/2018 6:17:00 PM	J8387-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8388-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8388-FS	2	--	10/4/2018 6:17:00 PM	J8388-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8388-FS	3	--	10/4/2018 6:17:00 PM	J8388-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8389-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8389-FS	2	--	10/4/2018 6:17:00 PM	J8389-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8389-FS	3	--	10/4/2018 6:17:00 PM	J8389-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8390-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8390-FS	2	--	10/4/2018 6:17:00 PM	J8390-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8390-FS	3	--	10/4/2018 6:17:00 PM	J8390-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8391-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8391-FS	2	--	10/4/2018 6:17:00 PM	J8391-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8391-FS	3	--	10/4/2018 6:17:00 PM	J8391-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8392-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

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

18-0585

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	#					
J8392-FS	2	--	10/4/2018 6:17:00 PM	J8392-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8392-FS	3	--	10/4/2018 6:17:00 PM	J8392-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8393MS-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8393MS-FS	2	--	10/4/2018 6:17:00 PM	J8393MS-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8393MS-FS	3	--	10/4/2018 6:17:00 PM	J8393MS-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8394MSD-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8394MSD-FS	2	--	10/4/2018 6:17:00 PM	J8394MSD-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8394MSD-FS	3	--	10/4/2018 6:17:00 PM	J8394MSD-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8401-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8401-FS	2	--	10/4/2018 6:17:00 PM	J8401-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8401-FS	3	--	10/4/2018 6:17:00 PM	J8401-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8402-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8402-FS	2	--	10/4/2018 6:17:00 PM	J8402-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8402-FS	3	--	10/4/2018 6:17:00 PM	J8402-FS	0	10000	1000	10.000	10.000	10/04/18 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

18-0585

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	#					
J8403-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8403-FS	2	--	10/4/2018 6:17:00 PM	J8403-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8403-FS	3	C	10/4/2018 6:17:00 PM	J8403-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8403-FS	4	--	10/11/2018 1:27:00 PM	J8403-FS	3	1000	900	1.111	11.111	10/11/18 SAS
J8403-FS-D	5	--	10/11/2018 1:27:00 PM	J8403-FS	3	1000	100	10.000	100.000	10/11/18 SAS
J8404-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8404-FS	2	--	10/4/2018 6:17:00 PM	J8404-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8404-FS	3	C	10/4/2018 6:17:00 PM	J8404-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8404-FS	4	C	10/11/2018 1:28:00 PM	J8404-FS	3	1000	600	1.667	16.667	10/11/18 SAS
J8404-FS-D	5	--	10/11/2018 1:28:00 PM	J8404-FS	3	1000	400	2.500	25.000	10/11/18 SAS
J8404-FS	6	--	10/11/2018 1:30:00 PM	J8404-FS	4	600	400	1.500	25.000	10/11/18 SAS
J8404-FS-D	7	--	10/11/2018 1:30:00 PM	J8404-FS	4	600	200	3.000	50.000	10/11/18 SAS
J8405-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8405-FS	2	--	10/4/2018 6:17:00 PM	J8405-FS	0	10000	9000	1.111	1.111	10/04/18 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

18-0585

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	#					
J8405-FS	3	--	10/4/2018 6:17:00 PM	J8405-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8406-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8406-FS	2	--	10/4/2018 6:17:00 PM	J8406-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8406-FS	3	C	10/4/2018 6:17:00 PM	J8406-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8406-FS	4	--	10/11/2018 1:31:00 PM	J8406-FS	3	1000	940	1.064	10.638	10/11/18 SAS
J8406-FS-D	5	--	10/11/2018 1:31:00 PM	J8406-FS	3	1000	60	16.667	166.667	10/11/18 SAS
J8407-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8407-FS	2	--	10/4/2018 6:17:00 PM	J8407-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8407-FS	3	C	10/4/2018 6:17:00 PM	J8407-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8407-FS	4	C	10/11/2018 1:33:00 PM	J8407-FS	3	1000	500	2.000	20.000	10/11/18 SAS
J8407-FS-D	5	--	10/11/2018 1:33:00 PM	J8407-FS	3	1000	500	2.000	20.000	10/11/18 SAS
J8407-FS	6	--	10/11/2018 1:34:00 PM	J8407-FS	4	500	420	1.190	23.810	10/11/18 SAS
J8407-FS-D	7	--	10/11/2018 1:34:00 PM	J8407-FS	4	500	80	6.250	125.000	10/11/18 SAS
J8408-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS

Total Oil = [Sample Volume (uL) / Aliquot Volume (uL)] * [Aliquot Weight (mg)]
Dilution Factor = [Sample Volume (uL) / Aliqot Volume (uL))] * Prior Dilution Factor
* - "C" = Extract is Consumed

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

18-0585

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	#					
J8408-FS	2	--	10/4/2018 6:17:00 PM	J8408-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8408-FS	3	--	10/4/2018 6:17:00 PM	J8408-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8409-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8409-FS	2	--	10/4/2018 6:17:00 PM	J8409-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8409-FS	3	C	10/4/2018 6:17:00 PM	J8409-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8409-FS	4	--	10/11/2018 1:36:00 PM	J8409-FS	3	1000	920	1.087	10.870	10/11/18 SAS
J8409-FS-D	5	--	10/11/2018 1:36:00 PM	J8409-FS	3	1000	80	12.500	125.000	10/11/18 SAS
J8410-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8410-FS	2	--	10/4/2018 6:17:00 PM	J8410-FS	0	10000	9000	1.111	1.111	10/04/18 KB
J8410-FS	3	C	10/4/2018 6:17:00 PM	J8410-FS	0	10000	1000	10.000	10.000	10/04/18 KB
J8410-FS	4	--	10/11/2018 1:37:00 PM	J8410-FS	3	1000	920	1.087	10.870	10/11/18 SAS
J8410-FS-D	5	--	10/11/2018 1:37:00 PM	J8410-FS	3	1000	80	12.500	125.000	10/11/18 SAS
J8411-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8411-FS	2	--	10/4/2018 6:17:00 PM	J8411-FS	0	10000	9000	1.111	1.111	10/04/18 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

18-0585

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	#					
J8411-FS	3	--	10/4/2018 6:17:00 PM	J8411-FS	0	10000	1000	10.000	10.000	10/04/18 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

18-0585

CTO-4164: Analysis of Solids

SB, SS

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Oct 14 2018 10:25AM SAS	**Received On/By:**	Oct 22 2018 10:28AM DMS
Relinquished From:	Sample Preparation: NA	**Received Location:**	LC Laboratory: NA
Relinquish Comment:	NA	**Received Comment:**	NA

No.	BDO-ID:	PIV:	DF:	Condition:	Custody Comment:
1	CR894PB-FS(3)	1000	10	Intact	NA
2	CR895LCS-FS(3)	1000	10	Intact	NA
3	J8381-FS(3)	1000	10	Intact	NA
4	J8386-FS(3)	1000	10	Intact	NA
5	J8387-FS(3)	1000	10	Intact	NA
6	J8388-FS(3)	1000	10	Intact	NA
7	J8389-FS(3)	1000	10	Intact	NA
8	J8390-FS(3)	1000	10	Intact	NA
9	J8391-FS(3)	1000	10	Intact	NA
10	J8392-FS(3)	1000	10	Intact	NA
11	J8393MS-FS(3)	1000	10	Intact	NA
12	J8394MSD-FS(3)	1000	10	Intact	NA
13	J8401-FS(3)	1000	10	Intact	NA
14	J8402-FS(3)	1000	10	Intact	NA
15	J8403-FS(3)	1000	10	Intact	NA
16	J8403-FS-D(5)	1000	100	Intact	NA
17	J8404-FS(3)	1000	10	Intact	NA
18	J8404-FS-D(5)	1000	25	Intact	NA
19	J8404-FS-D(7)	1000	50	Intact	NA
20	J8405-FS(3)	1000	10	Intact	NA
21	J8406-FS(3)	1000	10	Intact	NA
22	J8406-FS-D(5)	1000	166.667	Intact	NA
23	J8407-FS(3)	1000	10	Intact	NA
24	J8407-FS-D(5)	1000	20	Intact	NA
25	J8407-FS-D(7)	1000	125	Intact	NA
26	J8408-FS(3)	1000	10	Intact	NA
27	J8409-FS(3)	1000	10	Intact	NA
28	J8409-FS-D(5)	1000	125	Intact	NA

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EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

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

Project No.(s)
100110125-01

18-0585

CTO-4164: Analysis of Solids

SB, SS

29	J8410-FS(3)	1000	10	Intact	NA
30	J8410-FS-D(5)	1000	125	Intact	NA
31	J8411-FS(3)	1000	10	Intact	NA
Total Extracts:	31				

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BATTELLE - NORWELL OPERATIONS
SAMPLE SPECIFIC COMMENTS

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

Project No.(s)
100110125-01

18-0585

CTO-4164: Analysis of Solids

SB, SS

Sample ID:	Comment:	Date/Initials:
CR894PB-FS	NA	NA
CR895LCS-FS	NA	NA
J8381-FS	NA	NA
J8386-FS	NA	NA
J8387-FS	NA	NA
J8388-FS	NA	NA
J8389-FS	NA	NA
J8390-FS	NA	NA
J8391-FS	NA	NA
J8392-FS	NA	NA
J8393MS-FS	NA	NA
J8394MSD-FS	NA	NA
J8401-FS	NA	NA
J8402-FS	NA	NA
J8403-FS	NA	NA
J8404-FS	NA	NA
J8405-FS	NA	NA
J8406-FS	NA	NA
J8407-FS	NA	NA
J8408-FS	NA	NA
J8409-FS	NA	NA
J8410-FS	NA	NA
J8411-FS	NA	NA

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It can be done

BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

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

Project No.(s)
100110125-01

18-0585

CTO-4164: Analysis of Solids

SB, SS

Entered By:	Lauren Griffith	**On:**	09/28/2018

For pre-screening by direct inject, an extract was prepared as follows:
After mixing the sample thoroughly, samples (BAL015) (target 1g) were weighed into a 50 mL polypropylene centrifuge tube.
10 mL of methanol (180913-07) was then added to the tube (pipette B641148506), and the sample was shaken on the geno grinder at 1200 rpm for 5 minutes. The extract was then centrifuged at 3000 rpm for 5 minutes.

650 uL of methanol (180913-07) and 200uL MilliQ water were then pipetted (B820865811) into an eppendorf tube, followed by 50 uL of KB33 (pipette B814659662). A 100 uL aliquot (pipette I0793912B) of extract was then added to the eppendorf tube containing spiked methanol. The tube was then capped and vortexed to mix. An aliquot was then transferred to an autosampler vial and submitted for analysis.

Task Leader Approval:	Lauren Griffith	**On:**	09/28/2018
SupervisorApproval:	Denise Schumitz	**On:**	10/22/2018
PM Approval:	Jonathan Thorn	**On:**	10/22/2018

Analytical Calibrations

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 17/10/2018 11:23:07 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		10/14/2018 12:14:09 PM	5-0369.dam	18-0585_18-0583.wiff
2	KB73	L1	10/14/2018 12:25:01 PM	5-0369.dam	18-0585_18-0583.wiff
3	KB74	L2	10/14/2018 12:35:53 PM	5-0369.dam	18-0585_18-0583.wiff
4	KB75	L3	10/14/2018 12:46:44 PM	5-0369.dam	18-0585_18-0583.wiff
5	KB76	L4	10/14/2018 12:57:36 PM	5-0369.dam	18-0585_18-0583.wiff
6	KB77	L5	10/14/2018 1:08:28 PM	5-0369.dam	18-0585_18-0583.wiff
7	KB78	L6	10/14/2018 1:19:19 PM	5-0369.dam	18-0585_18-0583.wiff
8	KB79	L7	10/14/2018 1:30:11 PM	5-0369.dam	18-0585_18-0583.wiff
9	KB80 IB	Instrument Blank	10/14/2018 1:41:02 PM	5-0369.dam	18-0585_18-0583.wiff
10	KB81 ICC	ICC	10/14/2018 1:51:53 PM	5-0369.dam	18-0585_18-0583.wiff
11	KB89 Branch	Branch Standard	10/14/2018 2:02:45 PM	5-0369.dam	18-0585_18-0583.wiff
12	MeOH		10/14/2018 2:13:37 PM	5-0369.dam	18-0585_18-0583.wiff
25	CR894PB-FS(3)	Procedural Blank	10/14/2018 2:24:29 PM	5-0369.dam	18-0585_18-0583.wiff
26	CR895LCS-FS(3)	Laboratory Control Sample	10/14/2018 2:35:21 PM	5-0369.dam	18-0585_18-0583.wiff
27	J8381-FS(3)	VC-PM64B-SB03-0506	10/14/2018 2:46:12 PM	5-0369.dam	18-0585_18-0583.wiff
28	J8386-FS(3)	VC-HS09-SB01-0102	10/14/2018 2:57:04 PM	5-0369.dam	18-0585_18-0583.wiff
29	J8387-FS(3)	VC-HS09-SB01-0506	10/14/2018 3:07:57 PM	5-0369.dam	18-0585_18-0583.wiff
30	J8388-FS(3)	VC-HS09-SB02-0102	10/14/2018 3:18:49 PM	5-0369.dam	18-0585_18-0583.wiff
31	J8389-FS(3)	VC-HS09-SB02-0506	10/14/2018 3:29:41 PM	5-0369.dam	18-0585_18-0583.wiff
32	J8390-FS(3)	VC-HS09-SS03-000H	10/14/2018 3:40:32 PM	5-0369.dam	18-0585_18-0583.wiff
33	J8391-FS(3)	VC-HS09-SB03-0102	10/14/2018 3:51:23 PM	5-0369.dam	18-0585_18-0583.wiff
34	J8392-FS(3)	VC-HS09-SB03-0506	10/14/2018 4:02:14 PM	5-0369.dam	18-0585_18-0583.wiff
35	KB76 CCV	CCV	10/14/2018 4:13:06 PM	5-0369.dam	18-0585_18-0583.wiff
36	MeOH		10/14/2018 4:23:56 PM	5-0369.dam	18-0585_18-0583.wiff
37	J8393MS-FS(3)	VC-HS09-SB03-0506-MS	10/14/2018 4:34:46 PM	5-0369.dam	18-0585_18-0583.wiff
38	J8394MSD-FS(3)	VC-HS09-SB03-0506-MSD	10/14/2018 4:45:38 PM	5-0369.dam	18-0585_18-0583.wiff
39	J8401-FS(3)	VC-HS09-SS01-000H	10/14/2018 4:56:30	5-0369.dam	18-0585_18-0583.wiff

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 17/10/2018 11:23:07 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
			PM		
40	J8402-FS(3)	VC-HS09-SS02-000H	10/14/2018 5:07:22 PM	5-0369.dam	18-0585_18-0583.wiff
41	J8403-FS(3)	VC-AOC16-SS01-000H	10/14/2018 5:18:14 PM	5-0369.dam	18-0585_18-0583.wiff
42	J8403-FS-D(5)	VC-AOC16-SS01-000H	10/14/2018 5:29:05 PM	5-0369.dam	18-0585_18-0583.wiff
43	J8404-FS(3)	VC-AOC16-SB01-0102	10/14/2018 5:39:57 PM	5-0369.dam	18-0585_18-0583.wiff
44	J8404-FS-D(5)	VC-AOC16-SB01-0102	10/14/2018 5:50:48 PM	5-0369.dam	18-0585_18-0583.wiff
45	J8404-FS-D(7)	VC-AOC16-SB01-0102	10/14/2018 6:01:40 PM	5-0369.dam	18-0585_18-0583.wiff
46	KB77 CCV	CCV	10/14/2018 6:12:31 PM	5-0369.dam	18-0585_18-0583.wiff
47	MeOH		10/14/2018 6:23:22 PM	5-0369.dam	18-0585_18-0583.wiff
48	J8405-FS(3)	VC-AOC16-SB01-0506	10/14/2018 6:34:14 PM	5-0369.dam	18-0585_18-0583.wiff
49	J8406-FS(3)	VC-AOC16-SS02-000H	10/14/2018 6:45:06 PM	5-0369.dam	18-0585_18-0583.wiff
50	J8406-FS-D(5)	VC-AOC16-SS02-000H	10/14/2018 6:55:58 PM	5-0369.dam	18-0585_18-0583.wiff
51	J8407-FS(3)	VC-AOC16-SB02-0102	10/14/2018 7:06:50 PM	5-0369.dam	18-0585_18-0583.wiff
52	J8407-FS-D(5)	VC-AOC16-SB02-0102	10/14/2018 7:17:41 PM	5-0369.dam	18-0585_18-0583.wiff
53	J8407-FS-D(7)	VC-AOC16-SB02-0102	10/14/2018 7:28:31 PM	5-0369.dam	18-0585_18-0583.wiff
54	J8408-FS(3)	VC-AOC16-SB02-0506	10/14/2018 7:39:22 PM	5-0369.dam	18-0585_18-0583.wiff
1	J8409-FS(3)	VC-AOC16-SS03-000H	10/14/2018 7:50:12 PM	5-0369.dam	18-0585_18-0583.wiff
2	J8409-FS-D(5)	VC-AOC16-SS03-000H	10/14/2018 8:01:06 PM	5-0369.dam	18-0585_18-0583.wiff
3	KB76 CCV	CCV	10/14/2018 8:11:59 PM	5-0369.dam	18-0585_18-0583.wiff
4	MeOH		10/14/2018 8:22:53 PM	5-0369.dam	18-0585_18-0583.wiff
5	J8410-FS(3)	VC-AOC16-SB03-0102	10/14/2018 8:33:46 PM	5-0369.dam	18-0585_18-0583.wiff
6	J8410-FS-D(5)	VC-AOC16-SB03-0102	10/14/2018 8:44:38 PM	5-0369.dam	18-0585_18-0583.wiff
7	J8411-FS(3)	VC-AOC16-SB03-0506	10/14/2018 8:55:31 PM	5-0369.dam	18-0585_18-0583.wiff
8	KB77 CCV	CCV	10/14/2018 9:06:24 PM	5-0369.dam	18-0585_18-0583.wiff

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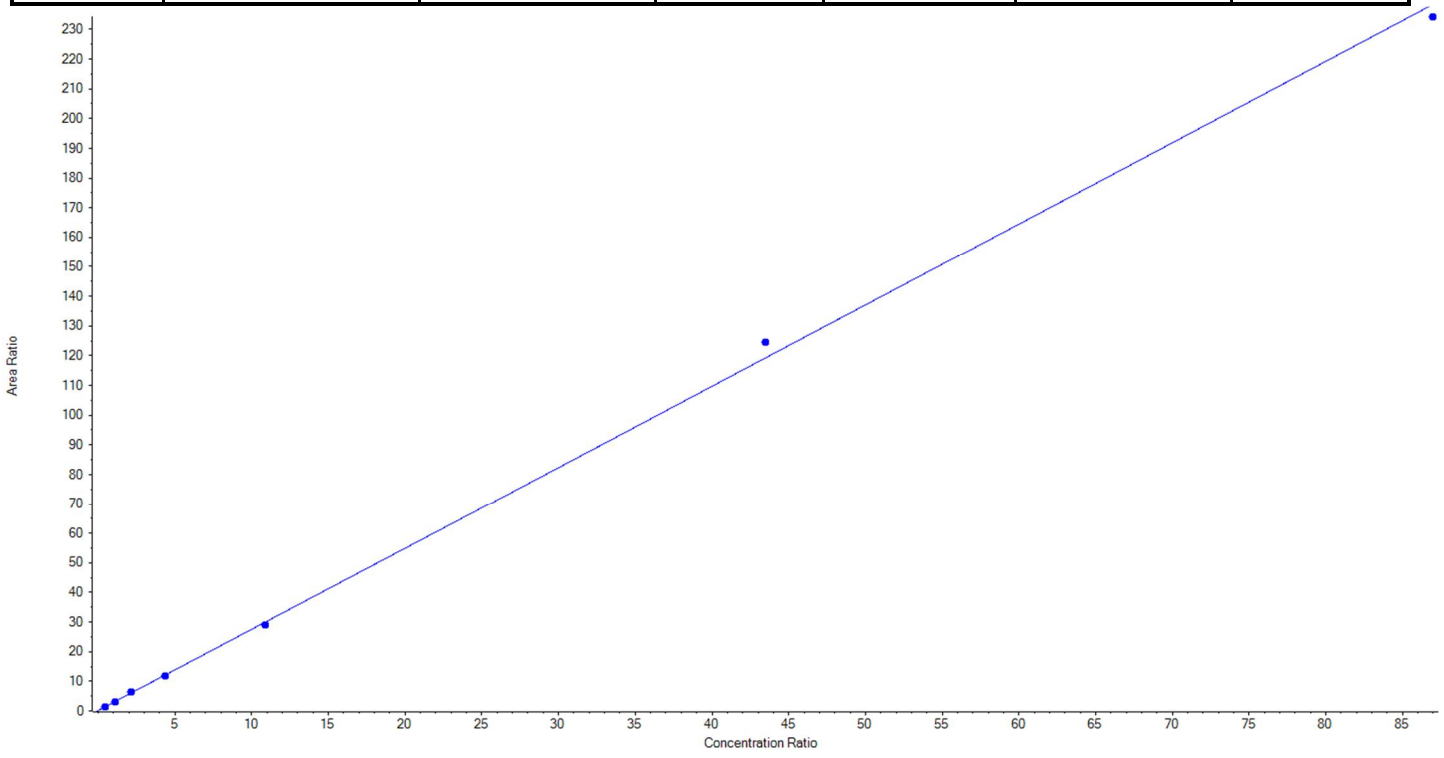
Calibration Summary Report

Created with Analyst Reporter
Printed: 17/10/2018 11:28:53 AM

Analyte Name	PFBS_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.73849 x + 0.15261 (r = 0.99950) (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	100.508541	99.5
3	KB74	L2	True	252.50	250.634359	99.3
4	KB75	L3	True	505.00	532.234965	105.4
5	KB76	L4	True	1010.00	975.854331	96.6
6	KB77	L5	True	2525.00	2436.537610	96.5
7	KB78	L6	True	10100.00	10551.026841	104.5
8	KB79	L7	True	20200.00	19846.703354	98.3



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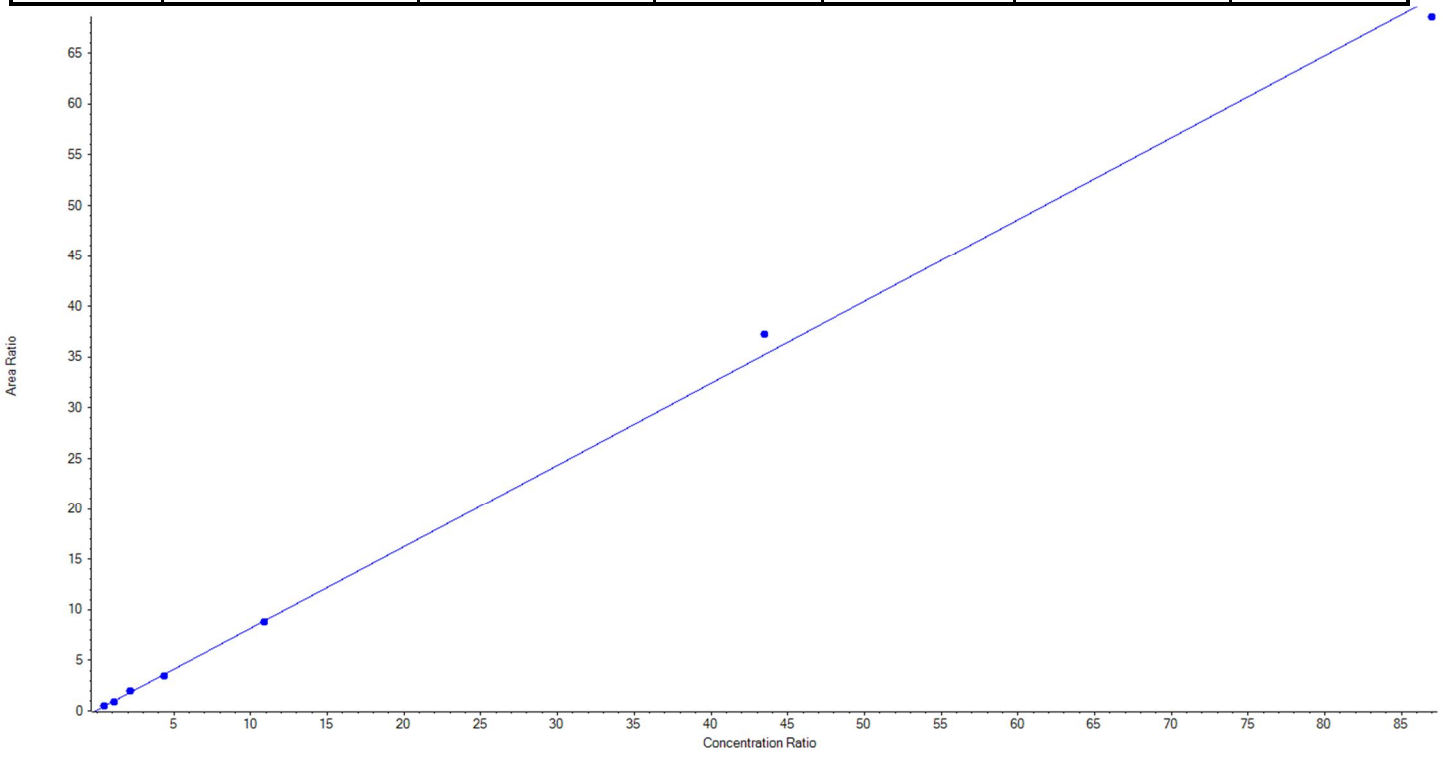
Calibration Summary Report

Created with Analyst Reporter
Printed: 17/10/2018 11:28:53 AM

Analyte Name	PFBS_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.80840 x + 0.08064 (r = 0.99920) (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	104.973014	103.9
3	KB74	L2	True	252.50	232.586481	92.1
4	KB75	L3	True	505.00	533.800722	105.7
5	KB76	L4	True	1010.00	968.926964	95.9
6	KB77	L5	True	2525.00	2506.399166	99.3
7	KB78	L6	True	10100.00	10669.903540	105.6
8	KB79	L7	True	20200.00	19676.910112	97.4



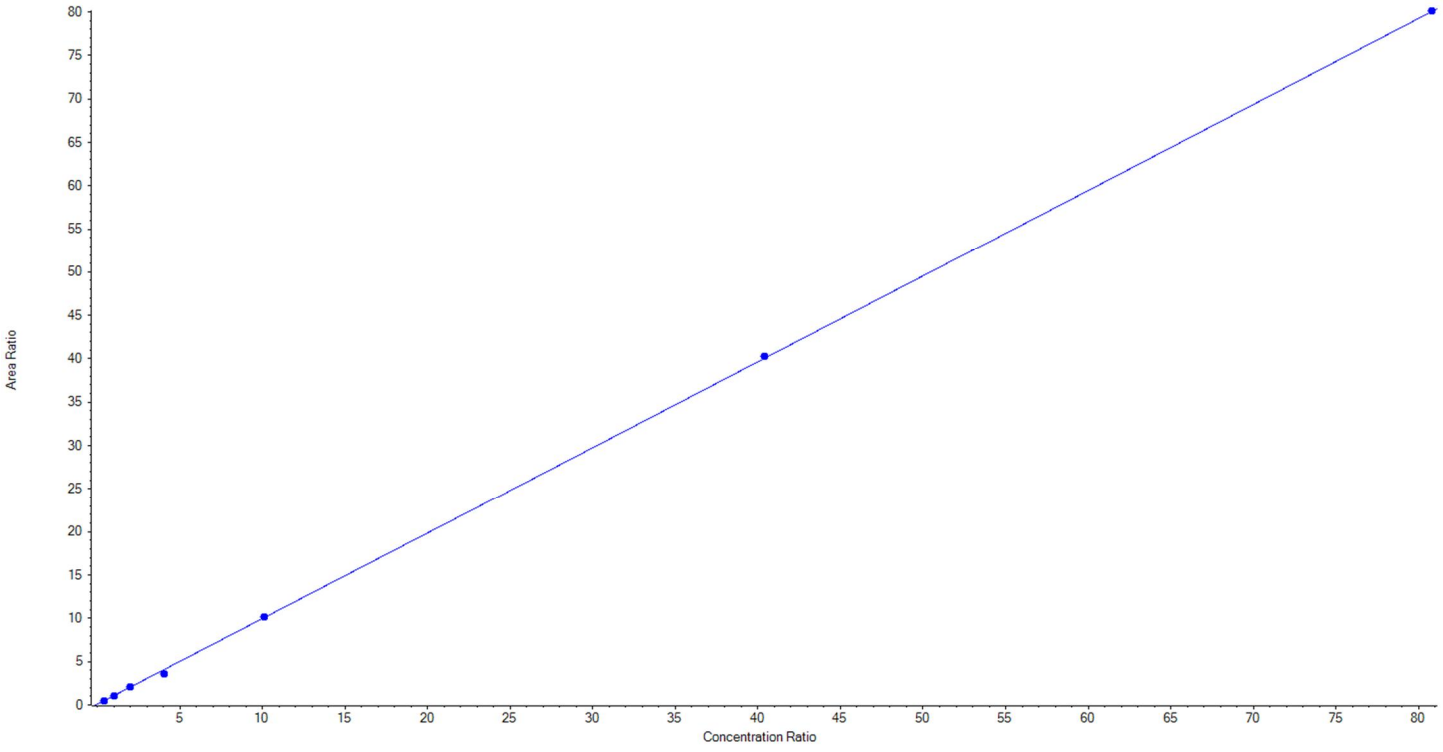
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Calibration Summary Report

Analyte Name	PFHxA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.98971 x + 0.07031 (r = 0.99978) (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	108.810616	107.7
3	KB74	L2	True	252.50	255.441826	101.2
4	KB75	L3	True	505.00	507.490422	100.5
5	KB76	L4	True	1010.00	897.348485	88.9
6	KB77	L5	True	2525.00	2554.105922	101.2
7	KB78	L6	True	10100.00	10152.794039	100.5
8	KB79	L7	True	20200.00	20217.508690	100.1



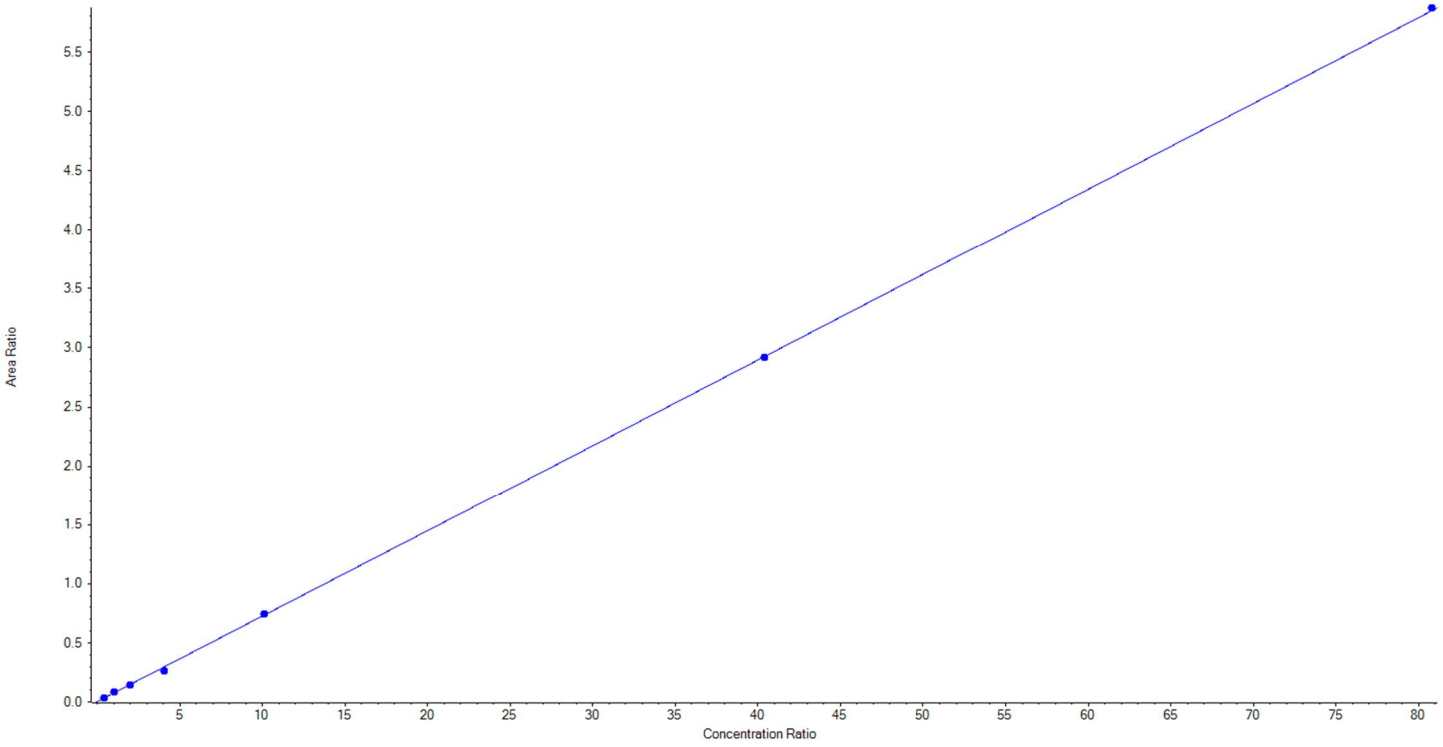
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Calibration Summary Report

Analyte Name	PFHxA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.07233 x + 0.00290 (r = 0.99972) (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	96.626394	95.7
3	KB74	L2	True	252.50	291.668576	115.5
4	KB75	L3	True	505.00	493.442238	97.7
5	KB76	L4	True	1010.00	907.899027	89.9
6	KB77	L5	True	2525.00	2553.633299	101.1
7	KB78	L6	True	10100.00	10066.268167	99.7
8	KB79	L7	True	20200.00	20283.962299	100.4



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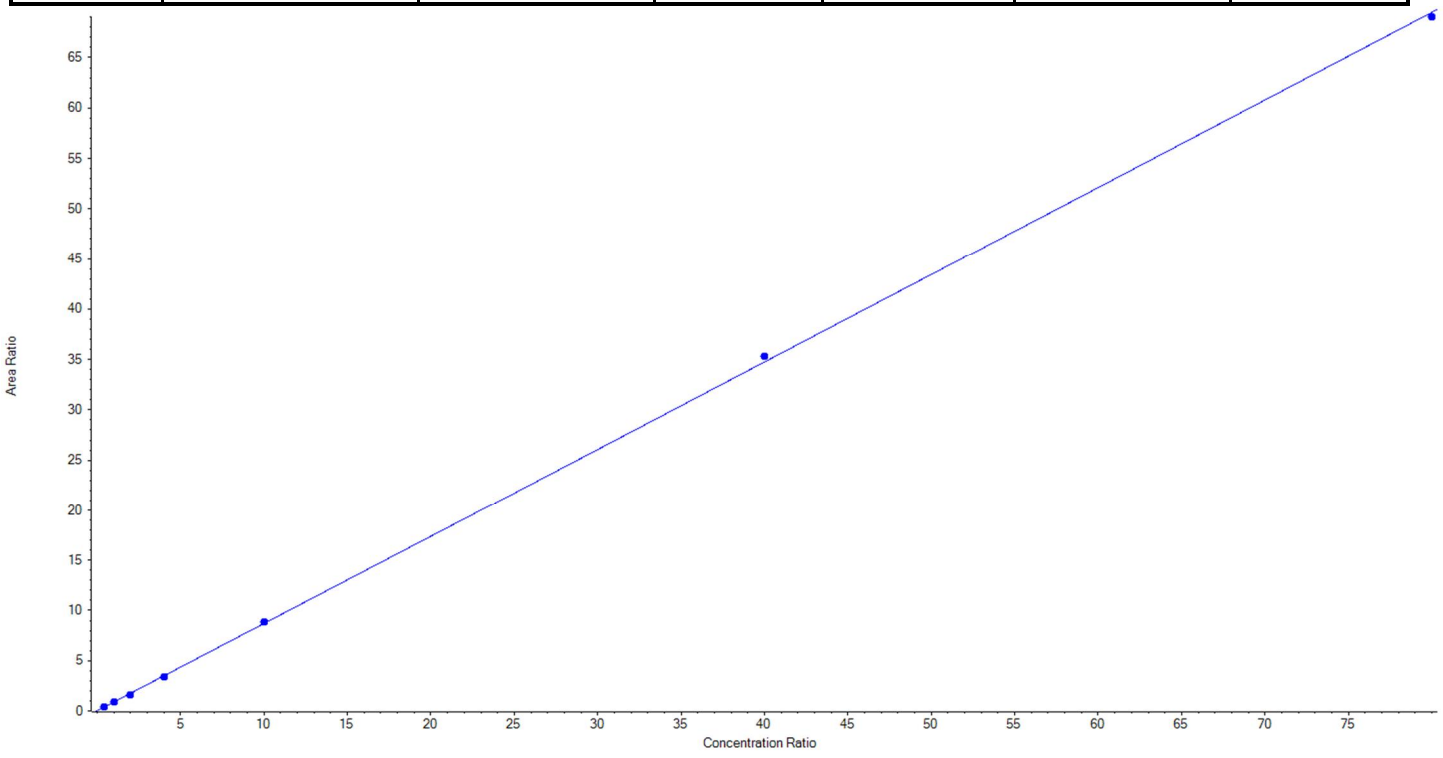
Calibration Summary Report

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Analyte Name	PFHpA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	363.0 / 319.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.86820 x + 0.01818 (r = 0.99985) (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	109.378901	109.4
3	KB74	L2	True	250.00	250.531214	100.2
4	KB75	L3	True	500.00	454.742181	91.0
5	KB76	L4	True	1000.00	971.695242	97.2
6	KB77	L5	True	2500.00	2533.494870	101.3
7	KB78	L6	True	10000.00	10160.014145	101.6
8	KB79	L7	True	20000.00	19870.143448	99.4



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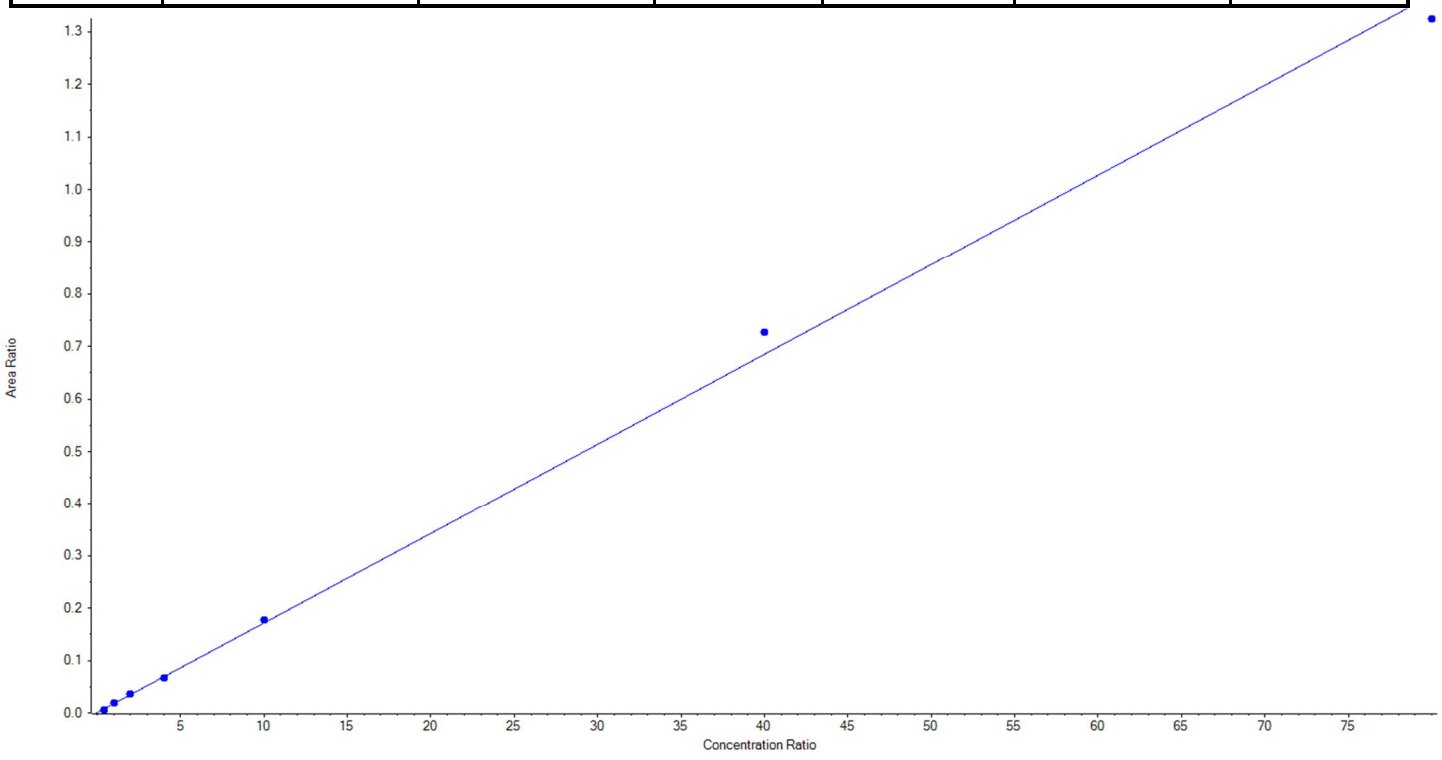
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Analyte Name	PFHpA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	363.0 / 169.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.01711 x + 5.70890e-4 (r = 0.99894) (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	87.419215	87.4
3	KB74	L2	True	250.00	272.137525	108.9
4	KB75	L3	True	500.00	512.271480	102.5
5	KB76	L4	True	1000.00	956.361339	95.6
6	KB77	L5	True	2500.00	2570.713799	102.8
7	KB78	L6	True	10000.00	10610.262033	106.1
8	KB79	L7	True	20000.00	19340.834609	96.7



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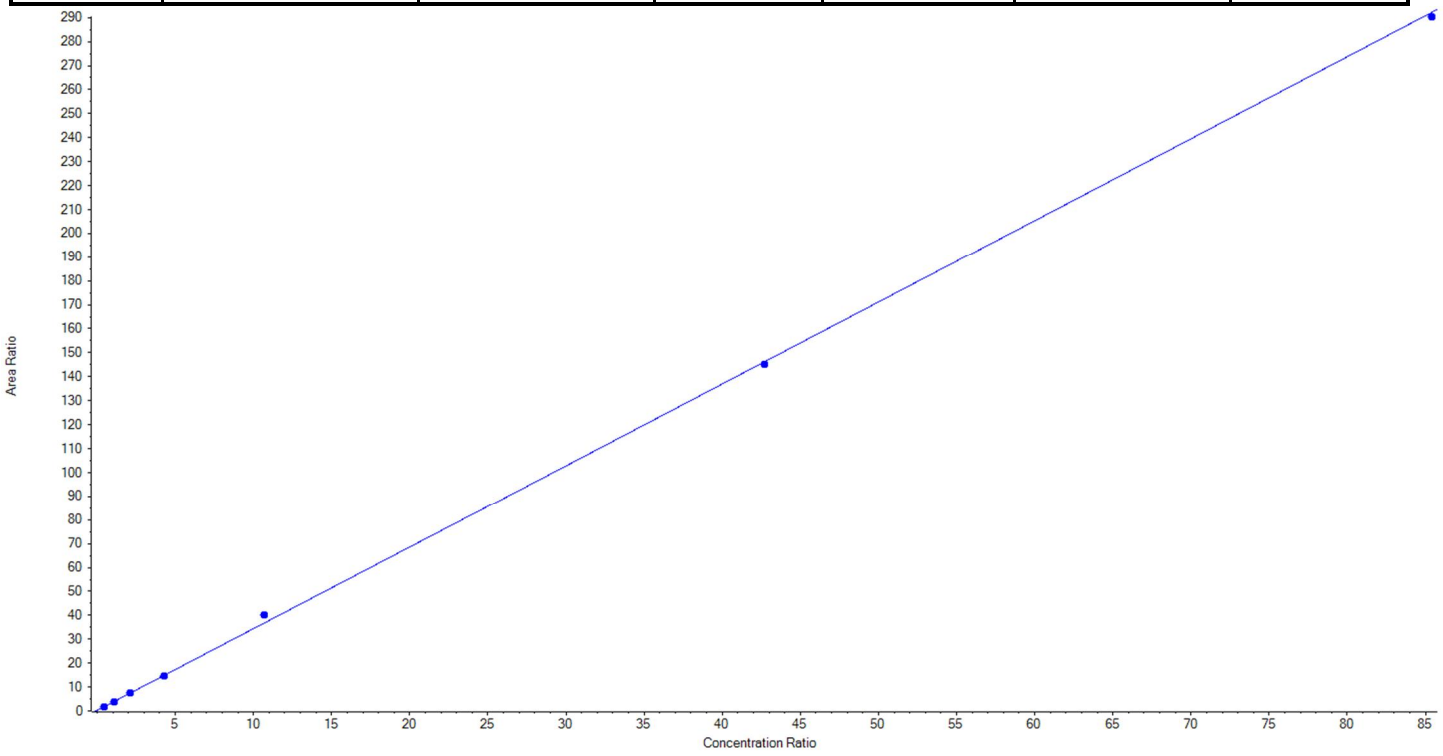
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Created with Analyst Reporter
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Analyte Name	PFHxS_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 3.41837 x + 0.22767 (r = 0.99962) (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	98.667560	97.7
3	KB74	L2	True	252.50	237.672593	94.1
4	KB75	L3	True	505.00	517.374784	102.5
5	KB76	L4	True	1010.00	989.008162	97.9
6	KB77	L5	True	2525.00	2757.432516	109.2
7	KB78	L6	True	10100.00	10024.721431	99.3
8	KB79	L7	True	20200.00	20068.622953	99.4



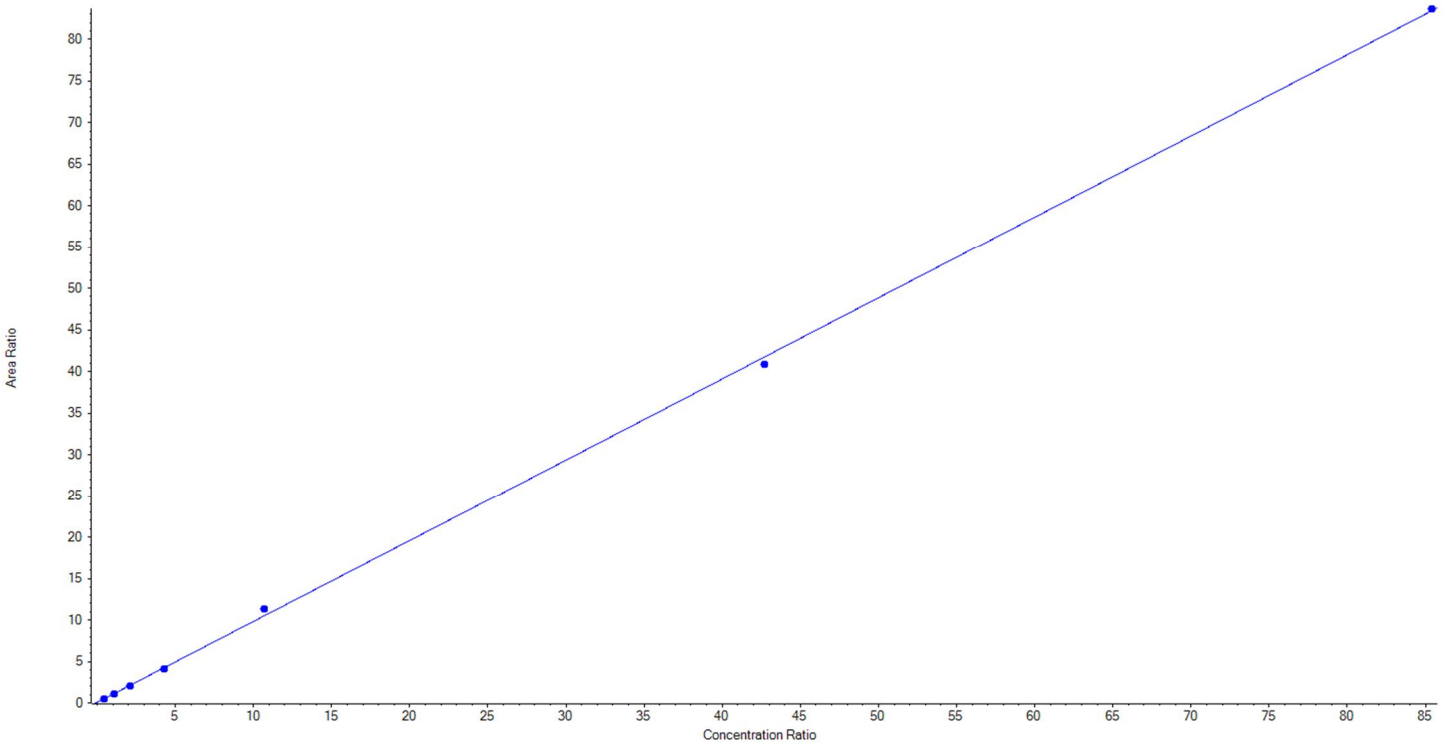
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Calibration Summary Report

Analyte Name	PFHxS_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.97595 x + 0.06484 (r = 0.99965) (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	103.341956	102.3
3	KB74	L2	True	252.50	247.818105	98.2
4	KB75	L3	True	505.00	486.568925	96.4
5	KB76	L4	True	1010.00	978.578682	96.9
6	KB77	L5	True	2525.00	2728.607961	108.1
7	KB78	L6	True	10100.00	9894.381625	98.0
8	KB79	L7	True	20200.00	20254.202745	100.3



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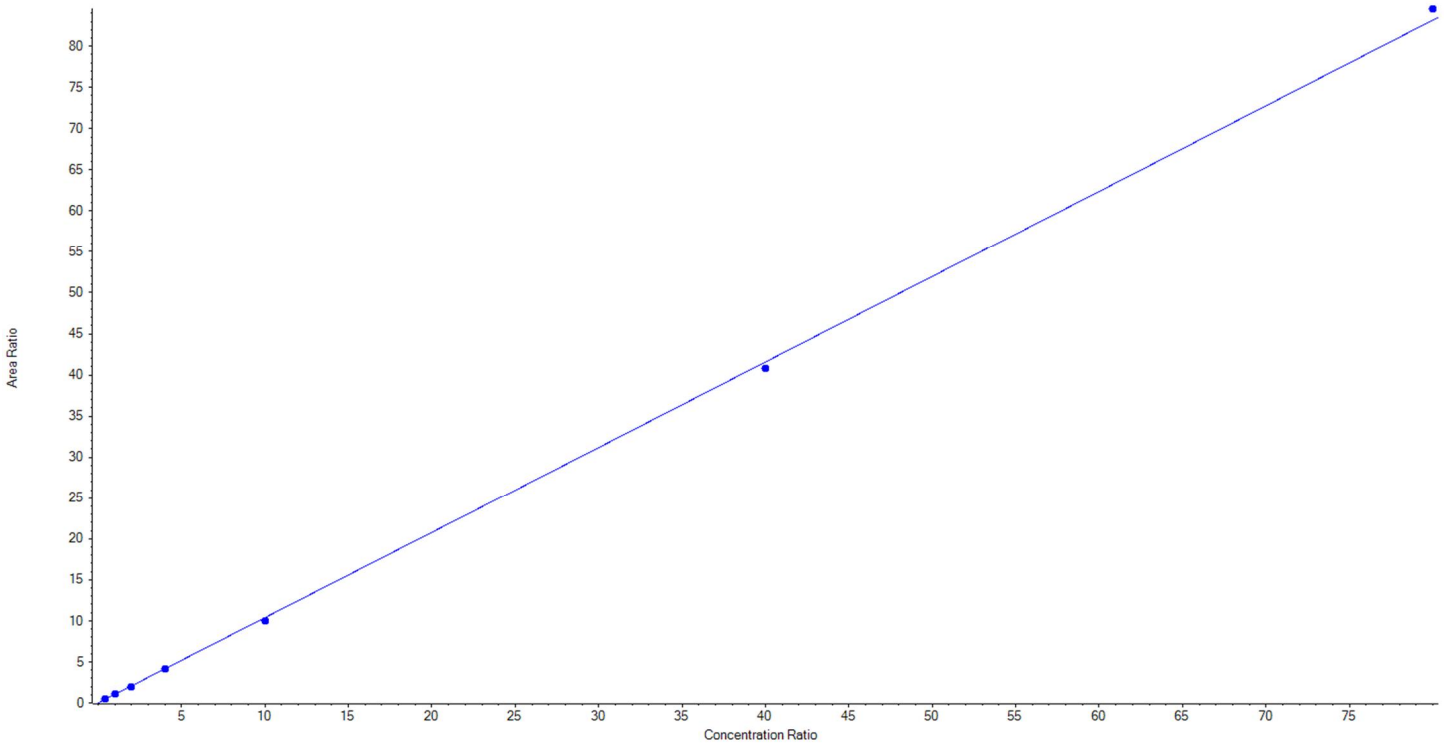
Calibration Summary Report

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Analyte Name	PFOA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.03971 x + -0.00348 (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	108.562585	108.6
3	KB74	L2	True	250.00	261.629716	104.7
4	KB75	L3	True	500.00	458.025313	91.6
5	KB76	L4	True	1000.00	995.677222	99.6
6	KB77	L5	True	2500.00	2399.417317	96.0
7	KB78	L6	True	10000.00	9800.522459	98.0
8	KB79	L7	True	20000.00	20326.165390	101.6



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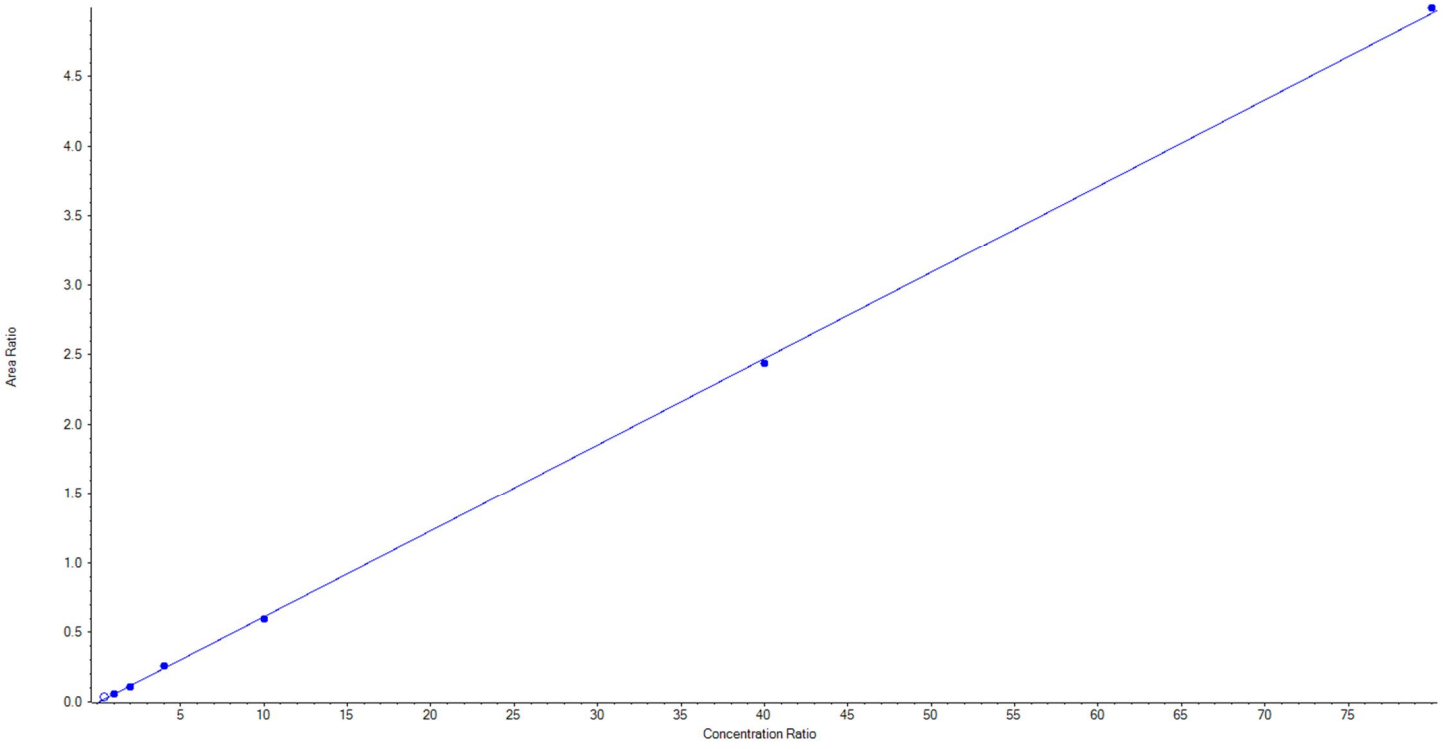
Calibration Summary Report

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Analyte Name	PFOA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.06201 x + -0.00742 (r = 0.99980) (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	186.082953	186.1
3	KB74	L2	True	250.00	254.066051	101.6
4	KB75	L3	True	500.00	470.534982	94.1
5	KB76	L4	True	1000.00	1072.350826	107.2
6	KB77	L5	True	2500.00	2442.924402	97.7
7	KB78	L6	True	10000.00	9852.781134	98.5
8	KB79	L7	True	20000.00	20157.342605	100.8



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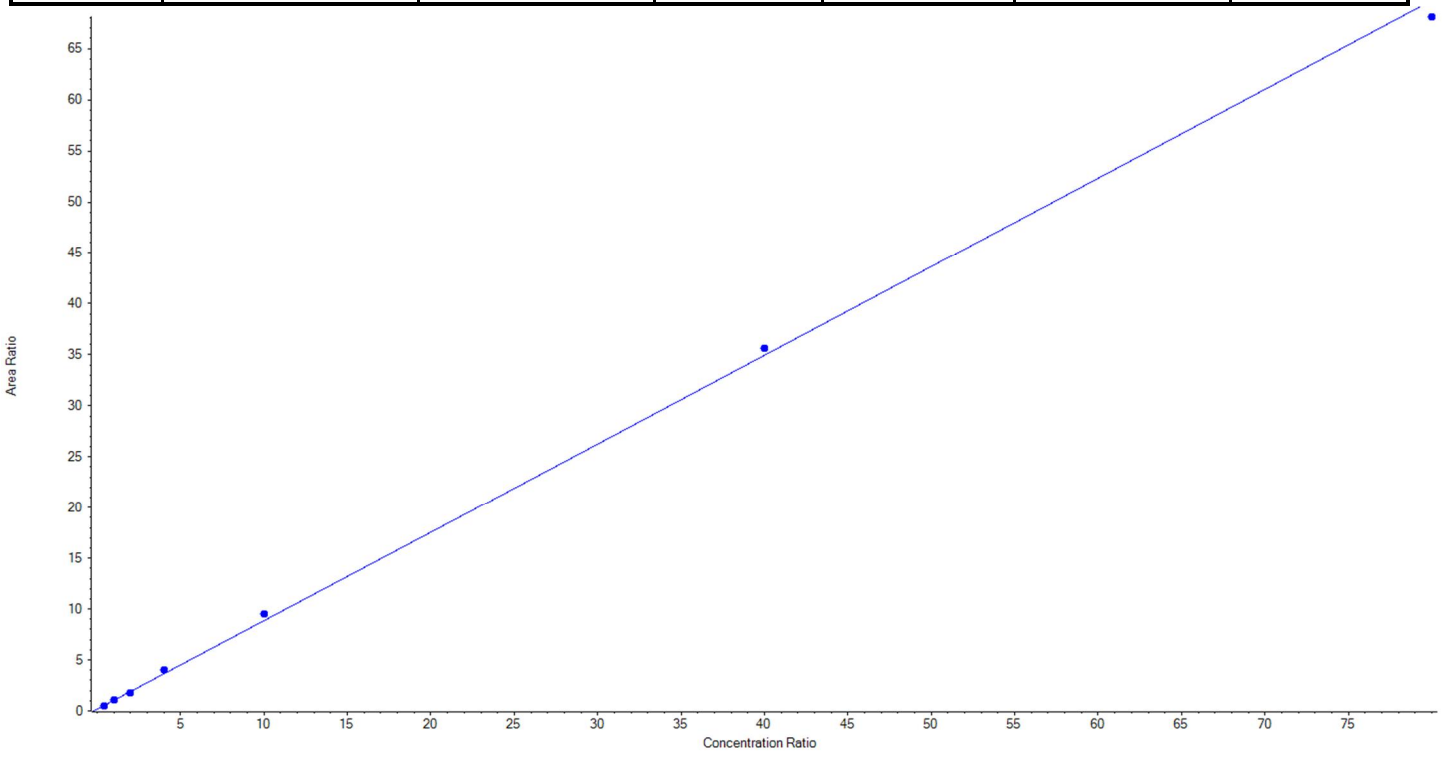
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Analyte Name	PFNA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.86941 x + 0.16705 (r = 0.99919) (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	84.547360	84.6
3	KB74	L2	True	250.00	267.106975	106.8
4	KB75	L3	True	500.00	449.487978	89.9
5	KB76	L4	True	1000.00	1111.820340	111.2
6	KB77	L5	True	2500.00	2694.794754	107.8
7	KB78	L6	True	10000.00	10205.443379	102.1
8	KB79	L7	True	20000.00	19536.799214	97.7



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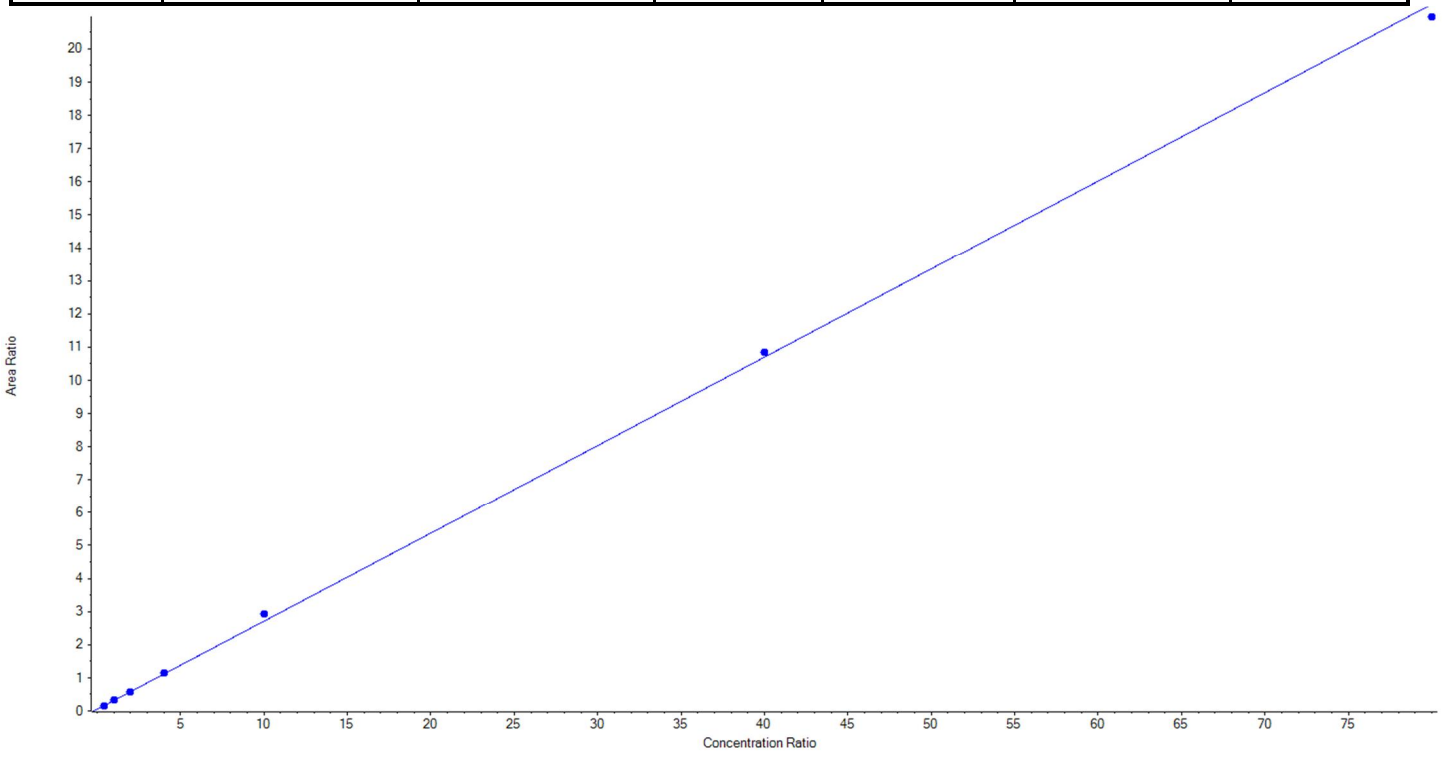
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Analyte Name	PFNA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.26619 x + 0.04983 (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	100.00	90.726226	90.7
3	KB74	L2	True	250.00	256.353586	102.5
4	KB75	L3	True	500.00	482.614568	96.5
5	KB76	L4	True	1000.00	1022.068861	102.2
6	KB77	L5	True	2500.00	2707.468474	108.3
7	KB78	L6	True	10000.00	10149.991831	101.5
8	KB79	L7	True	20000.00	19640.776454	98.2



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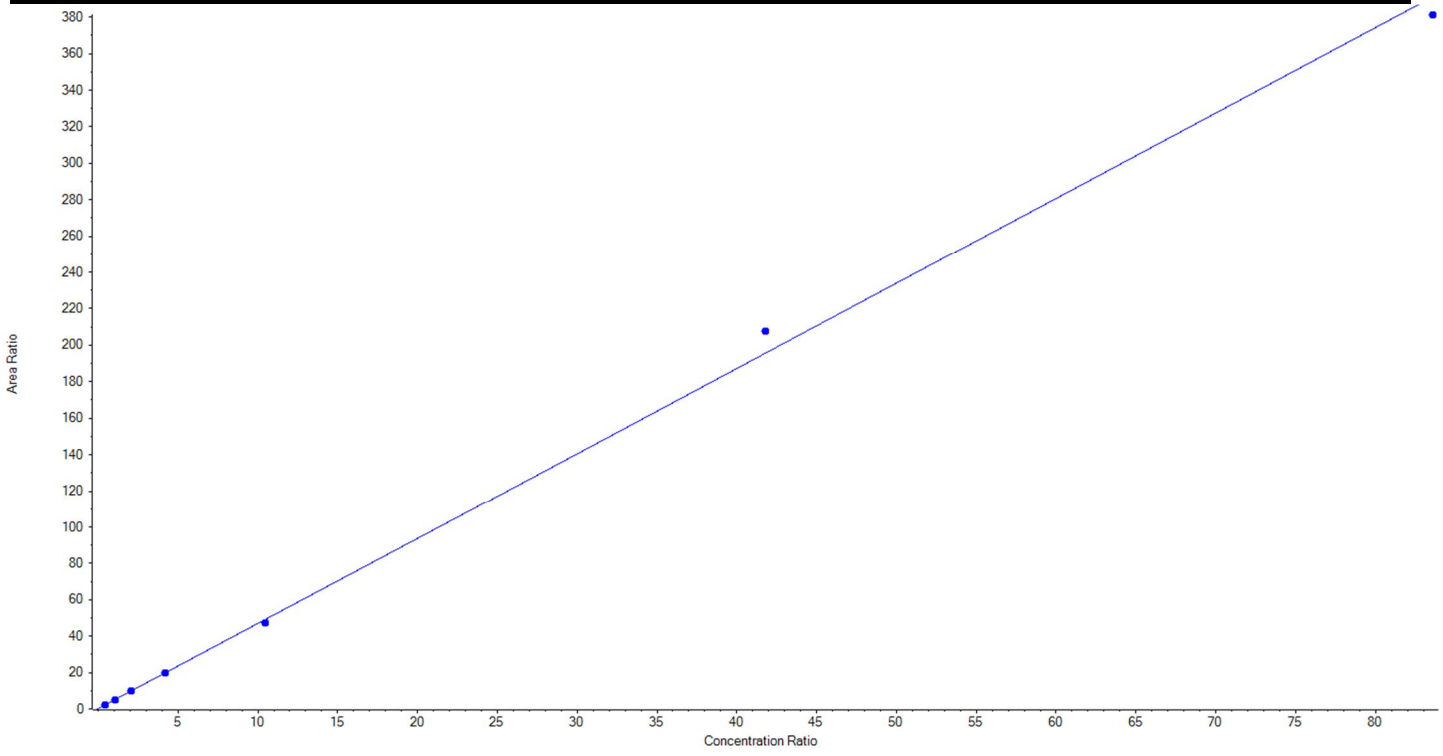
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Analyte Name	PFOS_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 4.67467 x + 0.21930 (r = 0.99915) (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	107.416508	107.4
3	KB74	L2	True	250.00	238.845452	95.5
4	KB75	L3	True	500.00	486.328897	97.3
5	KB76	L4	True	1000.00	994.580618	99.5
6	KB77	L5	True	2500.00	2419.142735	96.8
7	KB78	L6	True	10000.00	10607.466324	106.1
8	KB79	L7	True	20000.00	19496.219465	97.5



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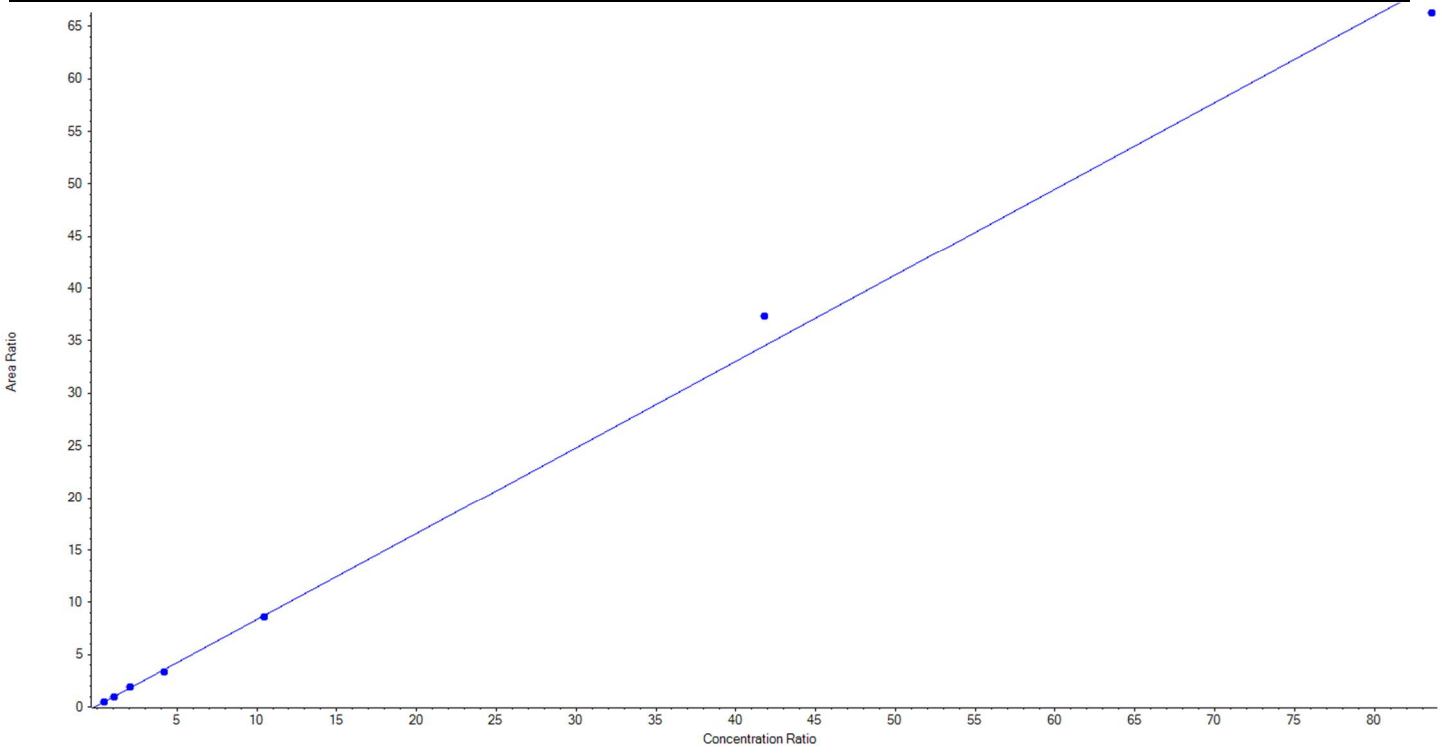
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Analyte Name	PFOS_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.82311 x + 0.11123 (r = 0.99837) (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	99.944163	99.9
3	KB74	L2	True	250.00	239.211228	95.7
4	KB75	L3	True	500.00	530.318821	106.1
5	KB76	L4	True	1000.00	947.792019	94.8
6	KB77	L5	True	2500.00	2478.331212	99.1
7	KB78	L6	True	10000.00	10824.623723	108.3
8	KB79	L7	True	20000.00	19229.778835	96.2



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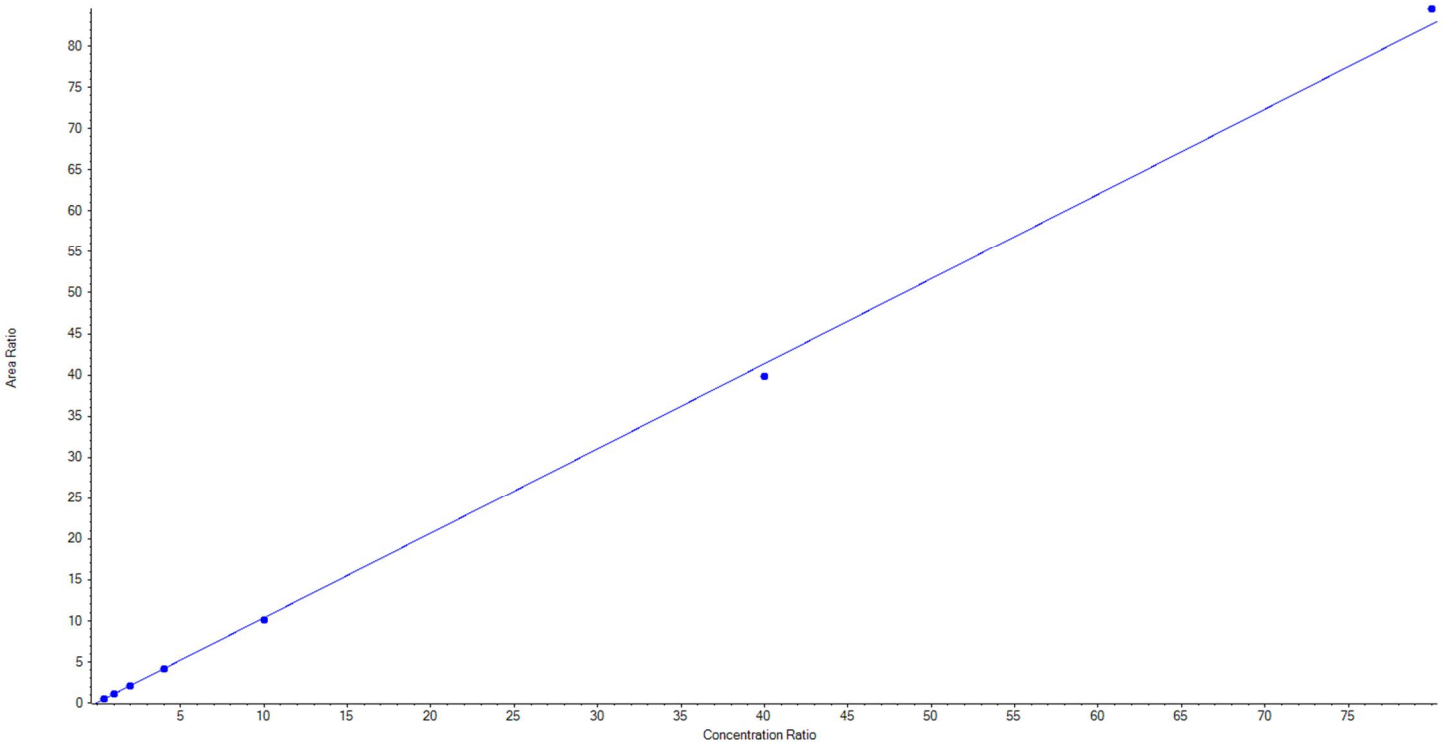
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Analyte Name	PFDA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	513.0 / 469.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.03307 x + 0.04360 (r = 0.99958) (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	103.005915	103.0
3	KB74	L2	True	250.00	264.156573	105.7
4	KB75	L3	True	500.00	483.725734	96.8
5	KB76	L4	True	1000.00	984.480424	98.5
6	KB77	L5	True	2500.00	2440.339152	97.6
7	KB78	L6	True	10000.00	9630.647919	96.3
8	KB79	L7	True	20000.00	20443.644282	102.2



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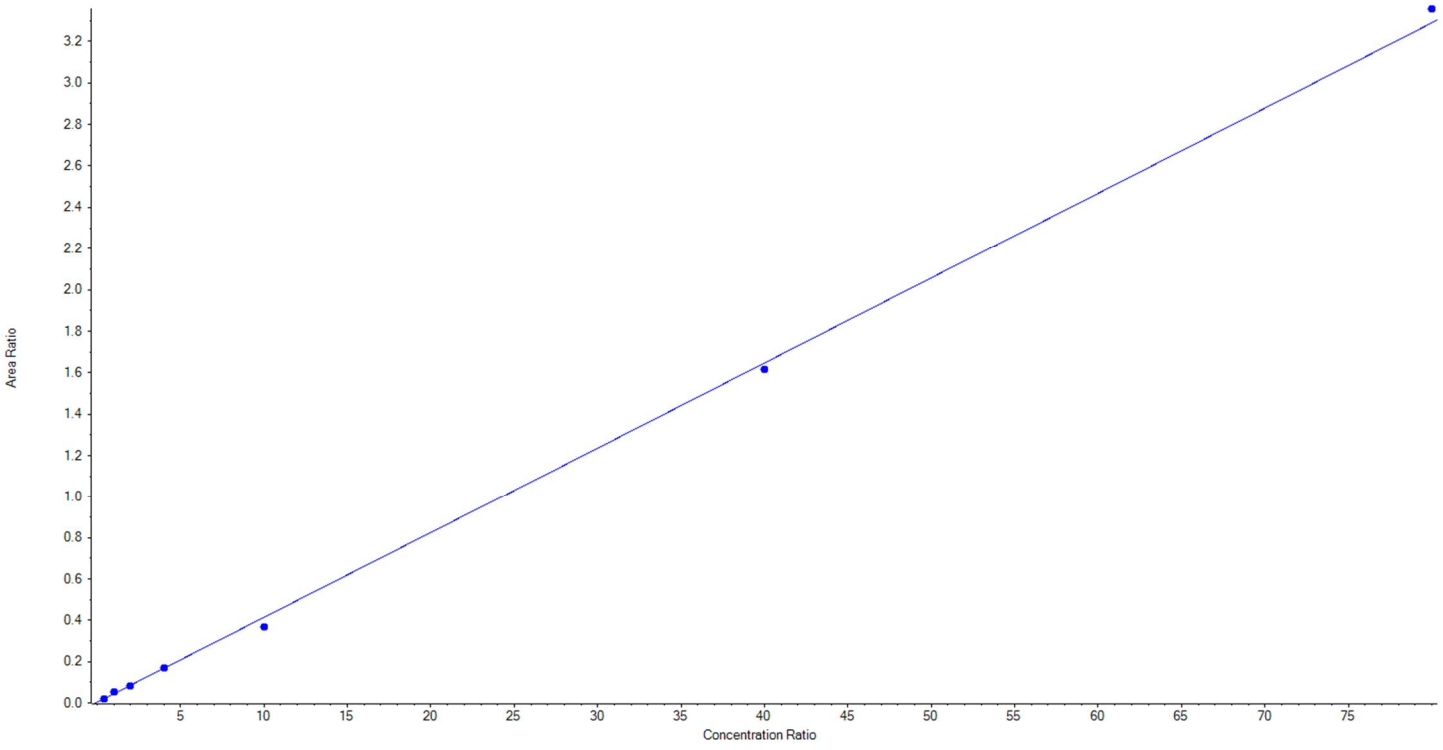
Calibration Summary Report

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Analyte Name	PFDA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	513.0 / 219.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04108 x + 0.00328 (r = 0.99909) (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	87.993271	88.0
3	KB74	L2	True	250.00	311.243515	124.5
4	KB75	L3	True	500.00	490.024516	98.0
5	KB76	L4	True	1000.00	1000.887262	100.1
6	KB77	L5	True	2500.00	2228.683671	89.2
7	KB78	L6	True	10000.00	9822.501680	98.2
8	KB79	L7	True	20000.00	20408.666086	102.0



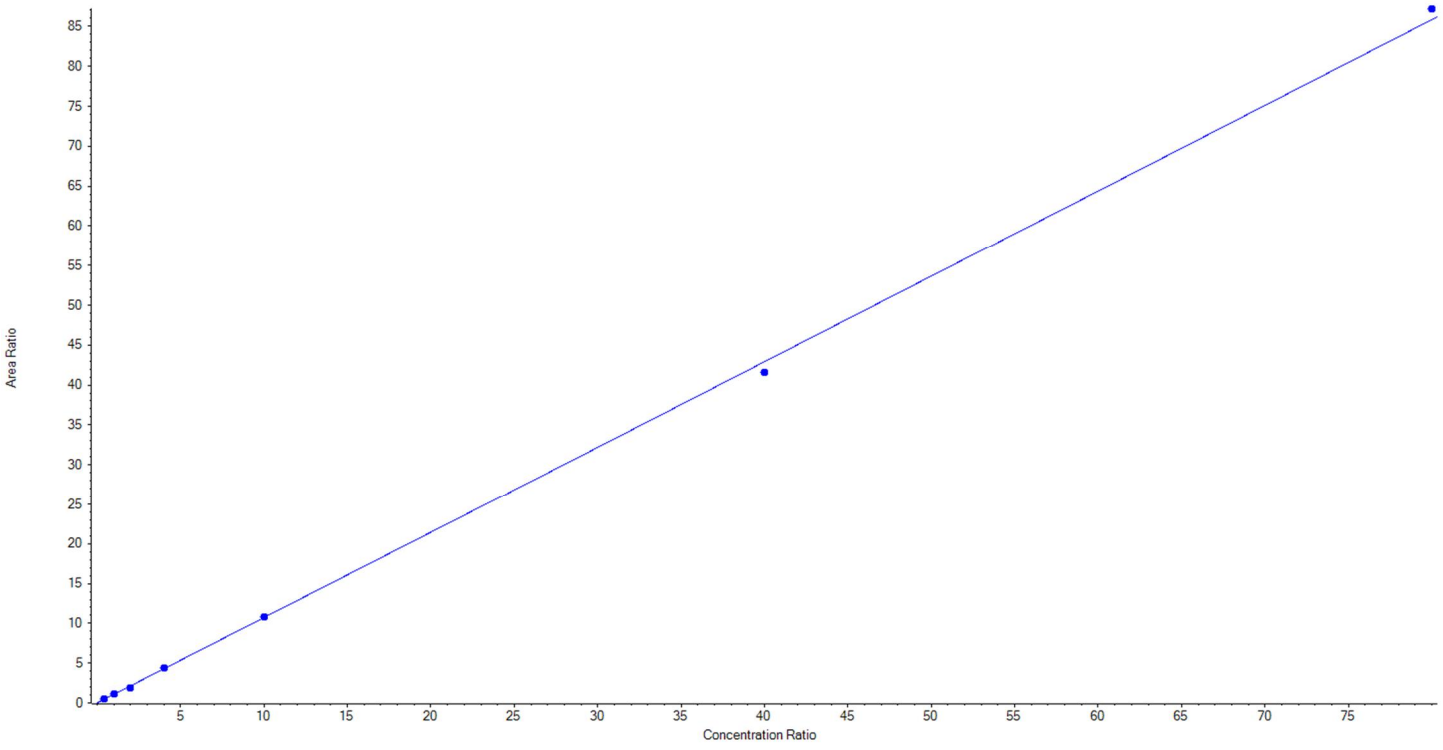
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Calibration Summary Report

Analyte Name	PFUnA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	563.0 / 519.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.07295 x + -0.00185 (r = 0.99967) (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	107.476986	107.5
3	KB74	L2	True	250.00	251.685215	100.7
4	KB75	L3	True	500.00	453.977887	90.8
5	KB76	L4	True	1000.00	1014.616700	101.5
6	KB77	L5	True	2500.00	2531.168763	101.3
7	KB78	L6	True	10000.00	9677.911533	96.8
8	KB79	L7	True	20000.00	20313.162915	101.6



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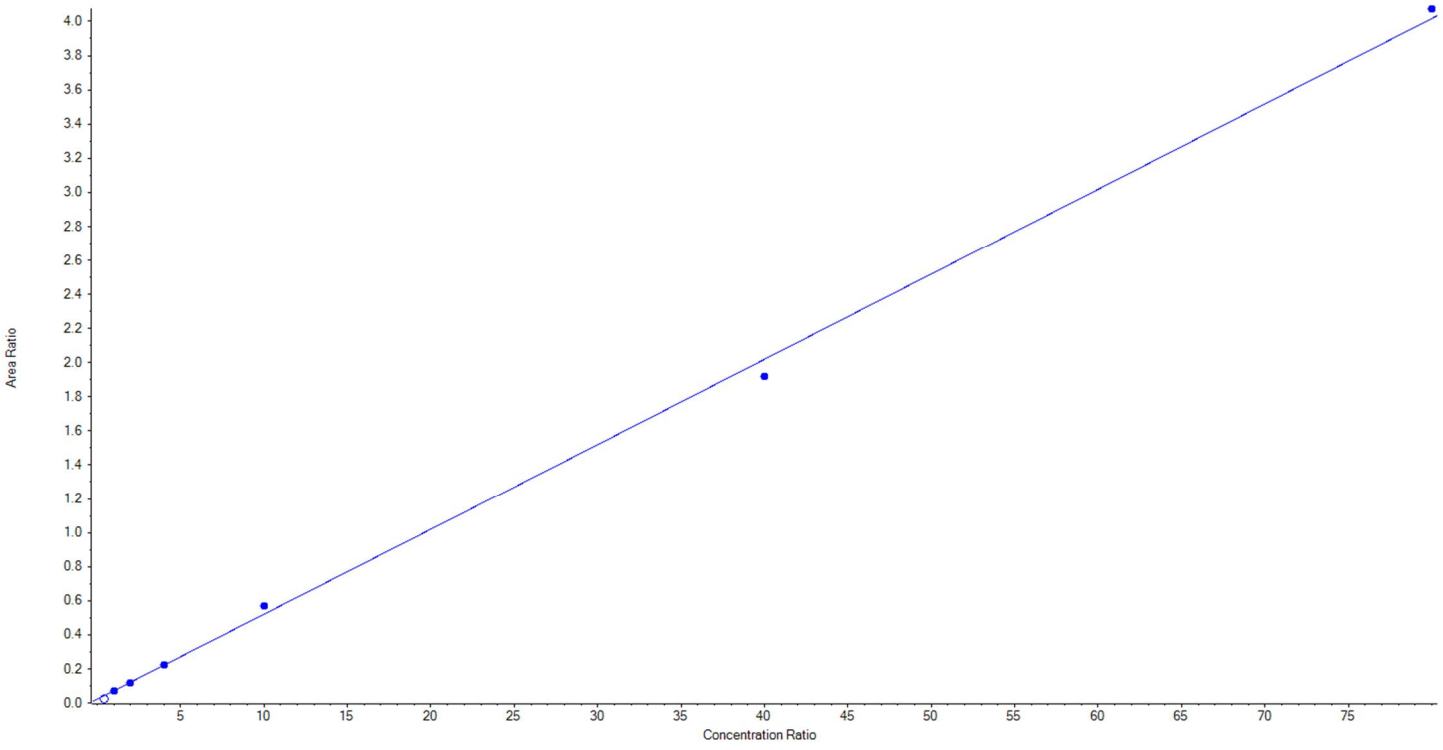
Calibration Summary Report

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Analyte Name	PFUnA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	563.0 / 269.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04995 x + 0.02132 (r = 0.99904) (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	18.012950	18.0
3	KB74	L2	True	250.00	242.887117	97.2
4	KB75	L3	True	500.00	481.959008	96.4
5	KB76	L4	True	1000.00	999.644410	100.0
6	KB77	L5	True	2500.00	2754.364561	110.2
7	KB78	L6	True	10000.00	9491.720703	94.9
8	KB79	L7	True	20000.00	20279.424201	101.4



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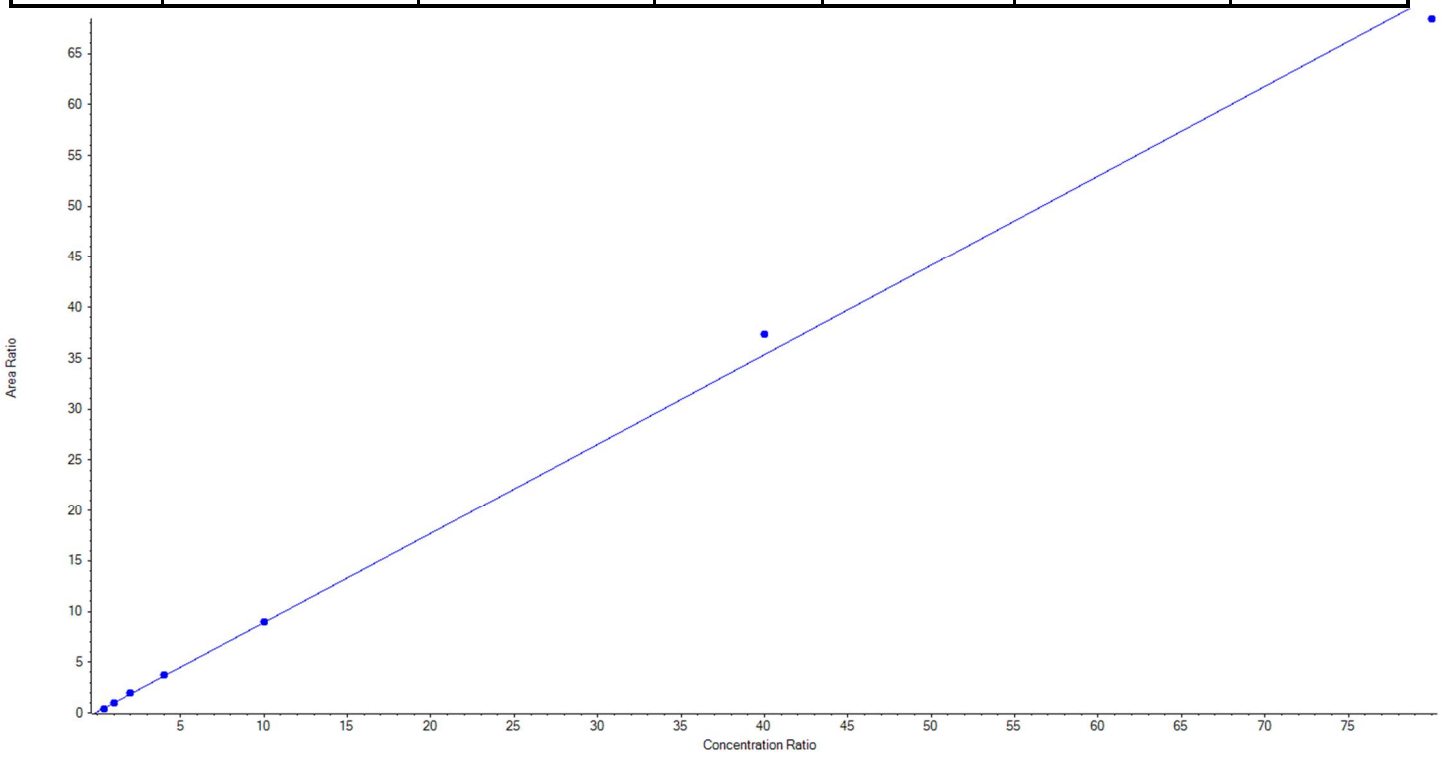
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Analyte Name	PFDoA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	613.0 / 569.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.88122 x + 0.09959 (r = 0.99913) (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	89.096034	89.1
3	KB74	L2	True	250.00	249.033090	99.6
4	KB75	L3	True	500.00	526.324928	105.3
5	KB76	L4	True	1000.00	1029.973188	103.0
6	KB77	L5	True	2500.00	2512.104680	100.5
7	KB78	L6	True	10000.00	10565.379593	105.7
8	KB79	L7	True	20000.00	19378.088488	96.9



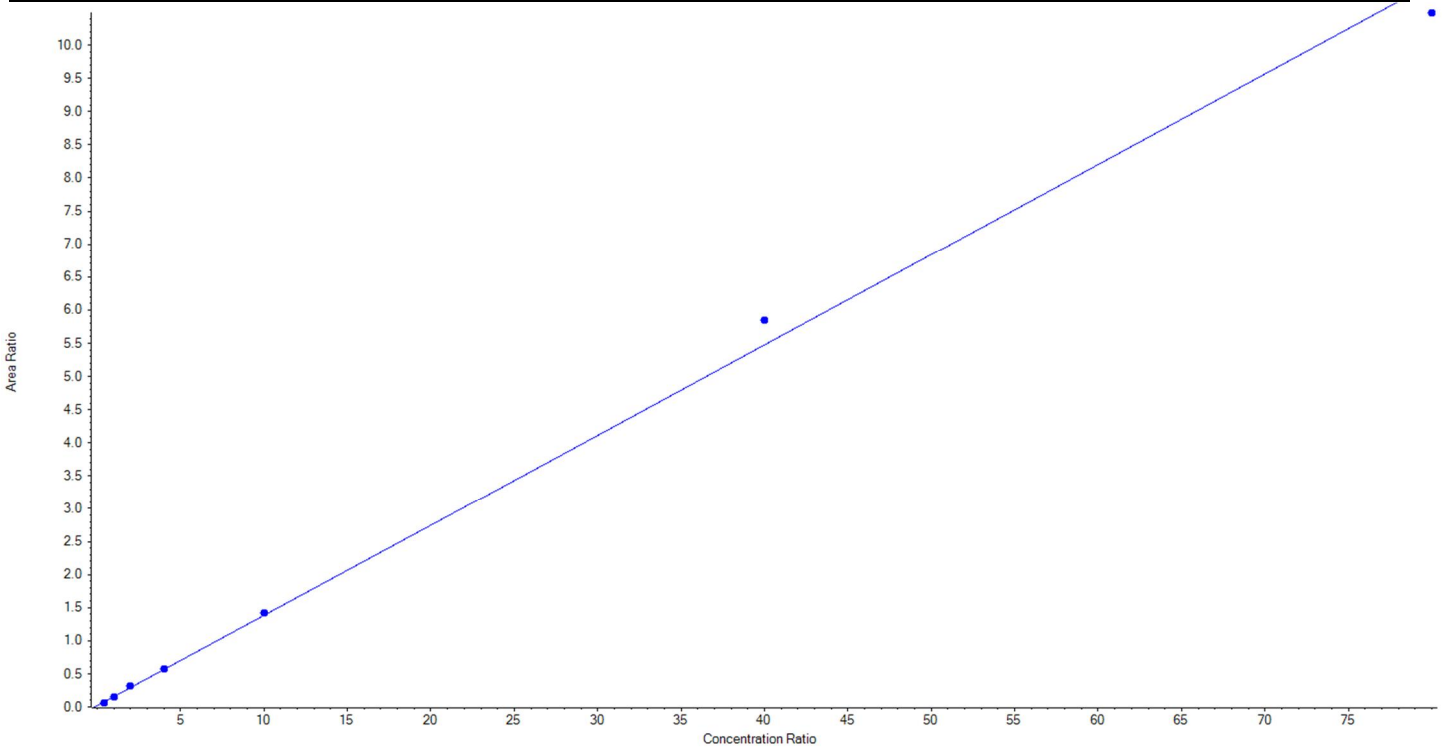
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Calibration Summary Report

Analyte Name	PFDoA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	613.0 / 319.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.13637 x + 0.01984 (r = 0.99854) (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	83.834610	83.8
3	KB74	L2	True	250.00	242.468633	97.0
4	KB75	L3	True	500.00	554.769739	111.0
5	KB76	L4	True	1000.00	1028.359731	102.8
6	KB77	L5	True	2500.00	2563.459258	102.5
7	KB78	L6	True	10000.00	10692.821021	106.9
8	KB79	L7	True	20000.00	19184.287007	95.9



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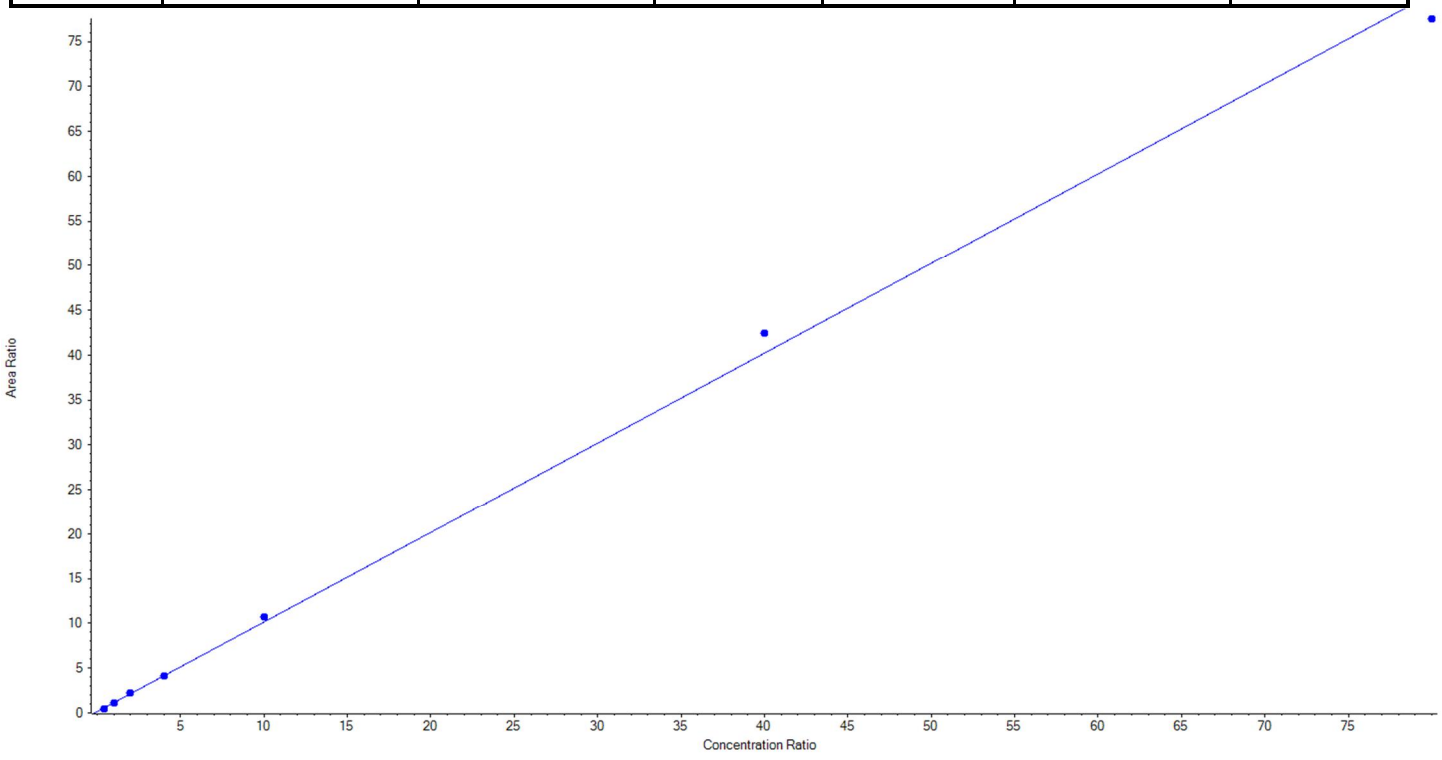
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Analyte Name	PFTrDA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	663.0 / 619.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.00249 x + 0.13669 (r = 0.99898) (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	88.381710	88.4
3	KB74	L2	True	250.00	251.136552	100.5
4	KB75	L3	True	500.00	516.237138	103.3
5	KB76	L4	True	1000.00	1002.427883	100.2
6	KB77	L5	True	2500.00	2642.100132	105.7
7	KB78	L6	True	10000.00	10548.173082	105.5
8	KB79	L7	True	20000.00	19301.543504	96.5



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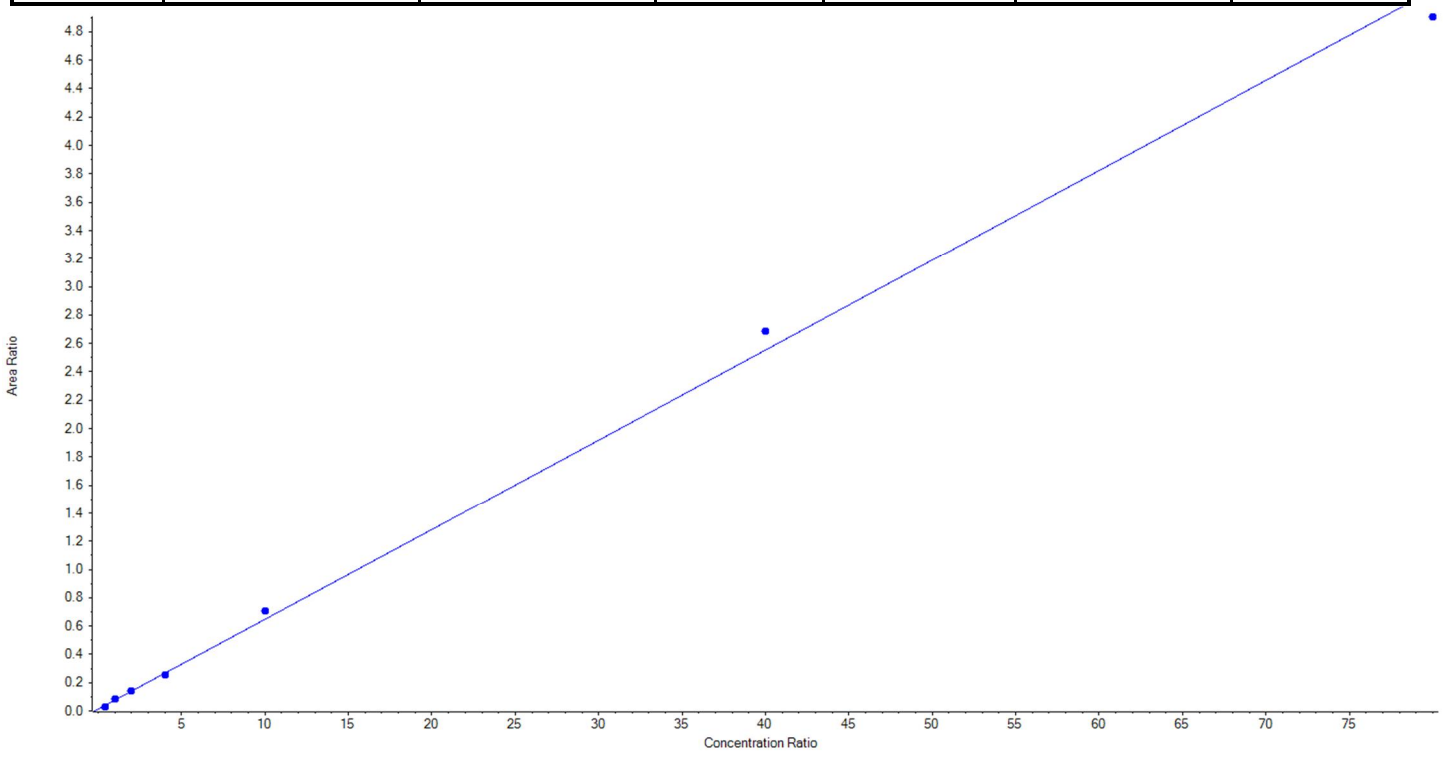
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Analyte Name	PFTrDA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	663.0 / 169.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.06351 x + 0.01272 (r = 0.99853) (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	74.946847	75.0
3	KB74	L2	True	250.00	294.577243	117.8
4	KB75	L3	True	500.00	498.914182	99.8
5	KB76	L4	True	1000.00	963.859948	96.4
6	KB77	L5	True	2500.00	2738.938649	109.6
7	KB78	L6	True	10000.00	10520.412689	105.2
8	KB79	L7	True	20000.00	19258.350443	96.3



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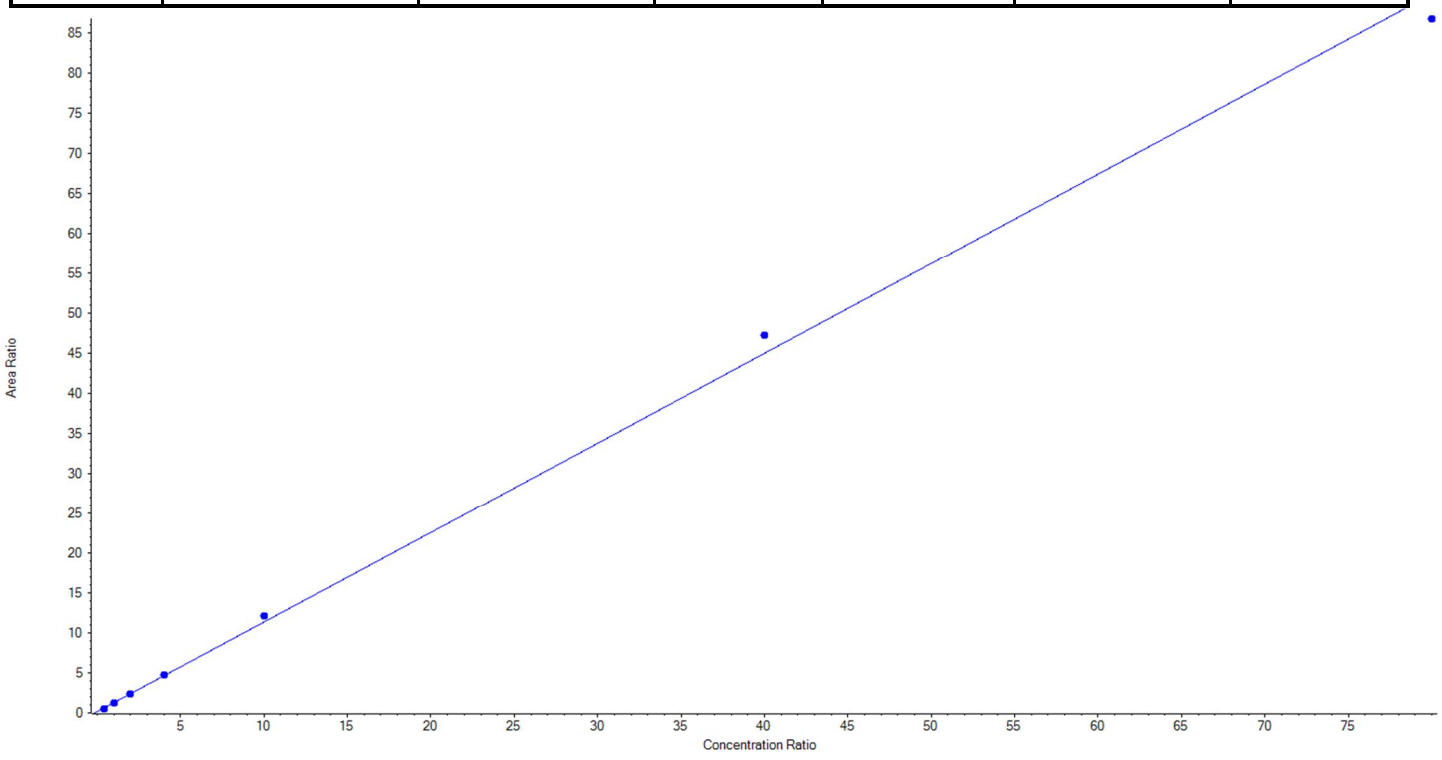
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Analyte Name	PFTeDA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.12184 x + 0.15528 (r = 0.99901) (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	85.190698	85.2
3	KB74	L2	True	250.00	257.037481	102.8
4	KB75	L3	True	500.00	504.798334	101.0
5	KB76	L4	True	1000.00	1031.897501	103.2
6	KB77	L5	True	2500.00	2656.331591	106.3
7	KB78	L6	True	10000.00	10503.581439	105.0
8	KB79	L7	True	20000.00	19311.162956	96.6



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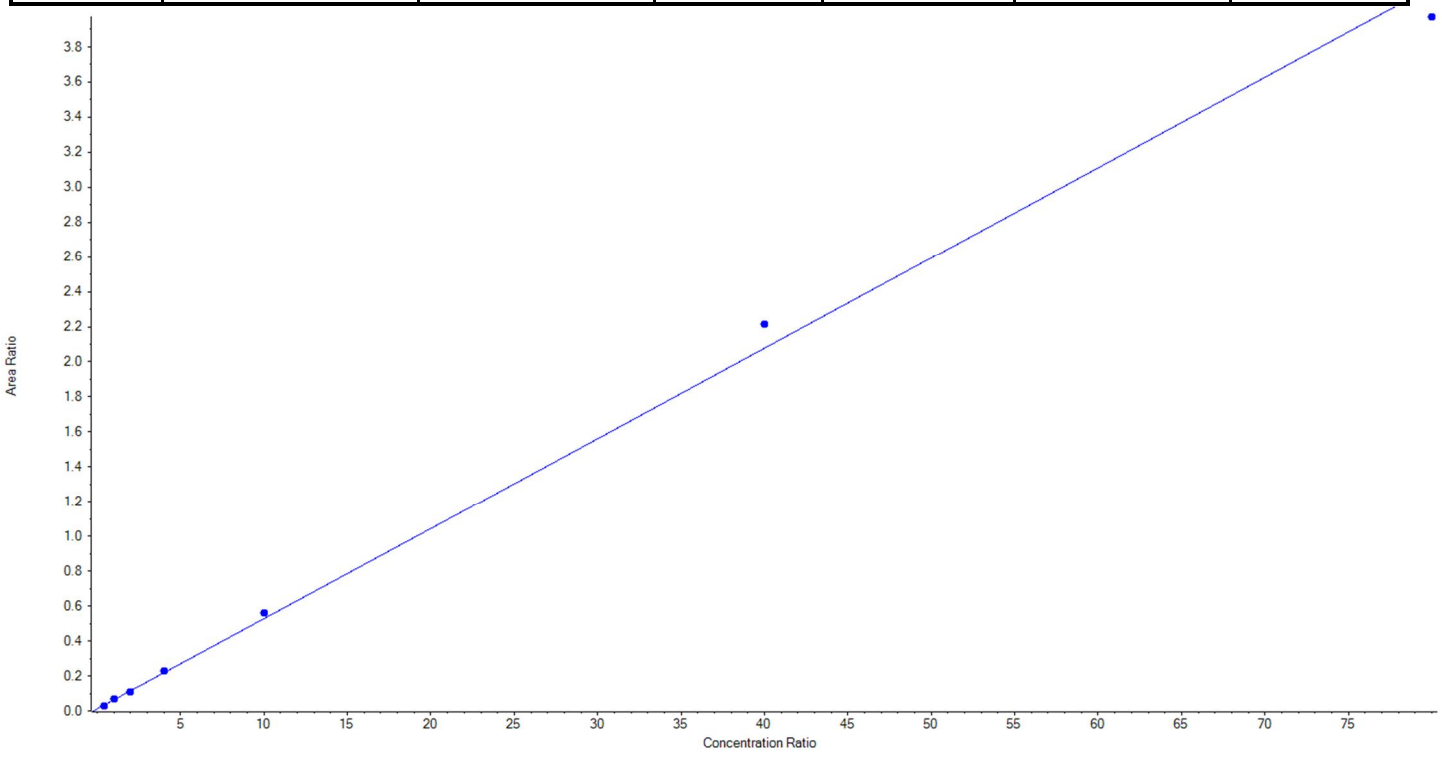
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Analyte Name	PFTeDA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05165 x + 0.01164 (r = 0.99852) (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	84.195949	84.2
3	KB74	L2	True	250.00	266.758889	106.7
4	KB75	L3	True	500.00	480.306995	96.1
5	KB76	L4	True	1000.00	1042.648241	104.3
6	KB77	L5	True	2500.00	2661.401828	106.5
7	KB78	L6	True	10000.00	10648.951861	106.5
8	KB79	L7	True	20000.00	19165.736237	95.8



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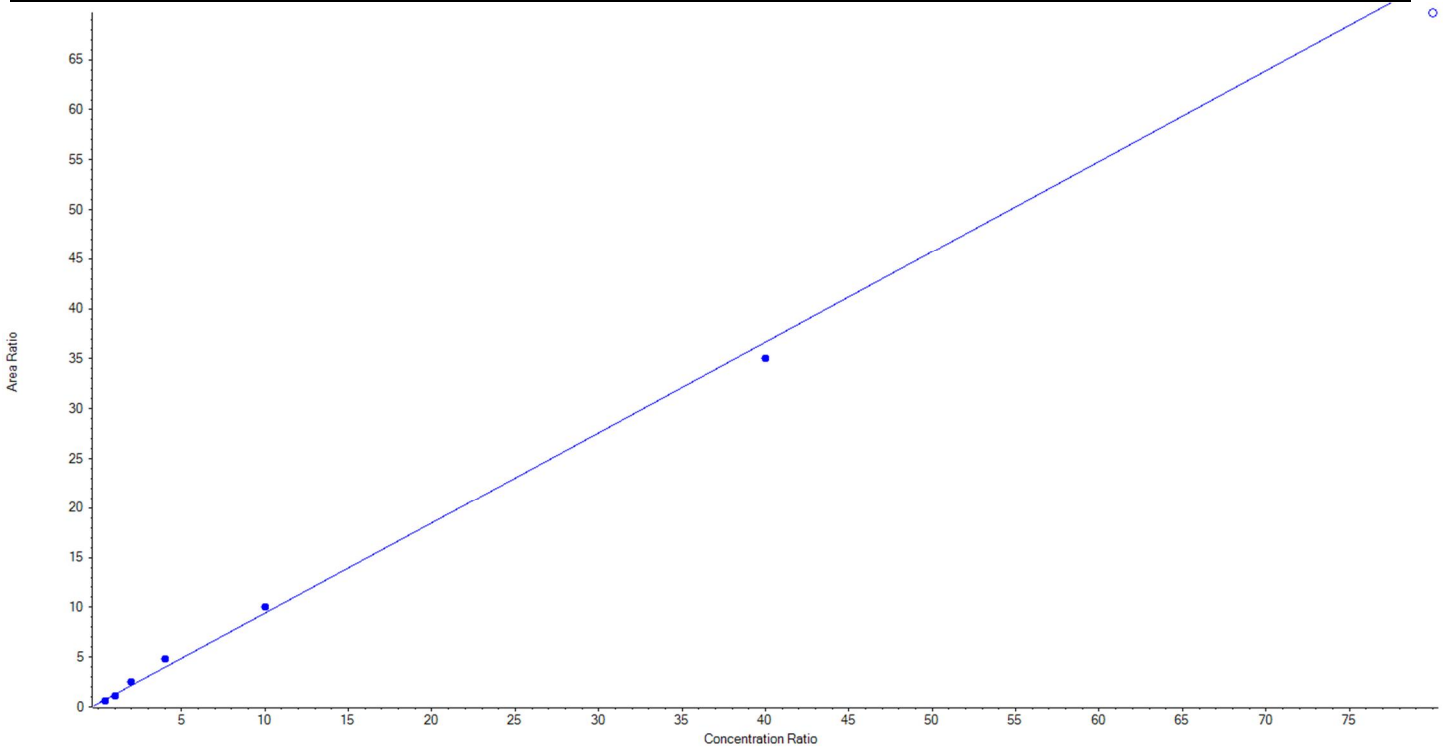
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Analyte Name	NMeFOSAA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.90804 x + 0.34259 (r = 0.99523) (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	71.469191	71.5
3	KB74	L2	True	250.00	208.839498	83.5
4	KB75	L3	True	500.00	595.249399	119.1
5	KB76	L4	True	1000.00	1233.267050	123.3
6	KB77	L5	True	2500.00	2673.555867	106.9
7	KB78	L6	True	10000.00	9567.618995	95.7
8	KB79	L7	False	20000.00	19092.468812	95.5



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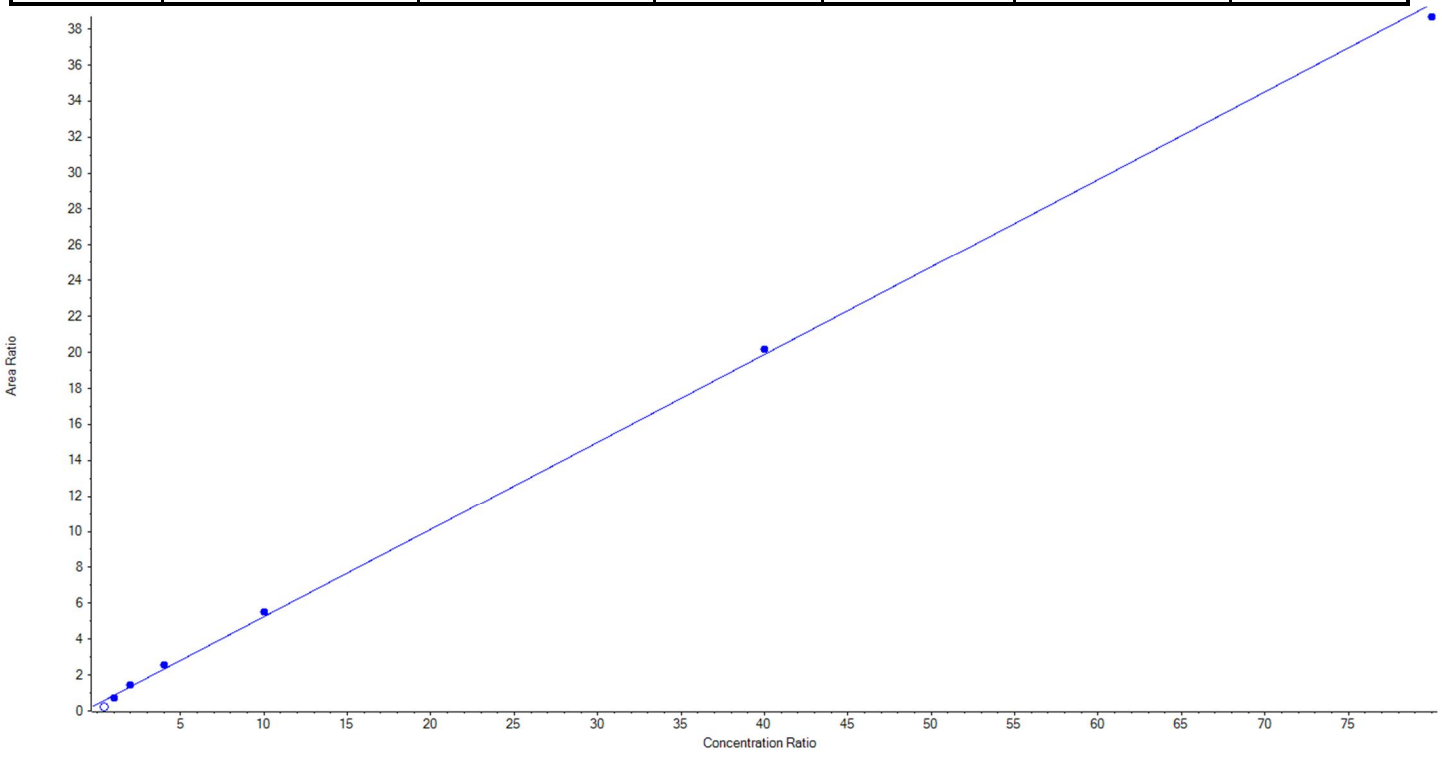
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Analyte Name	NMeFOSAA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.48762 x + 0.37640 (r = 0.99909) (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	< 0	N/A
3	KB74	L2	True	250.00	181.382642	72.6
4	KB75	L3	True	500.00	556.562411	111.3
5	KB76	L4	True	1000.00	1116.273104	111.6
6	KB77	L5	True	2500.00	2623.733926	105.0
7	KB78	L6	True	10000.00	10139.510763	101.4
8	KB79	L7	True	20000.00	19632.537155	98.2



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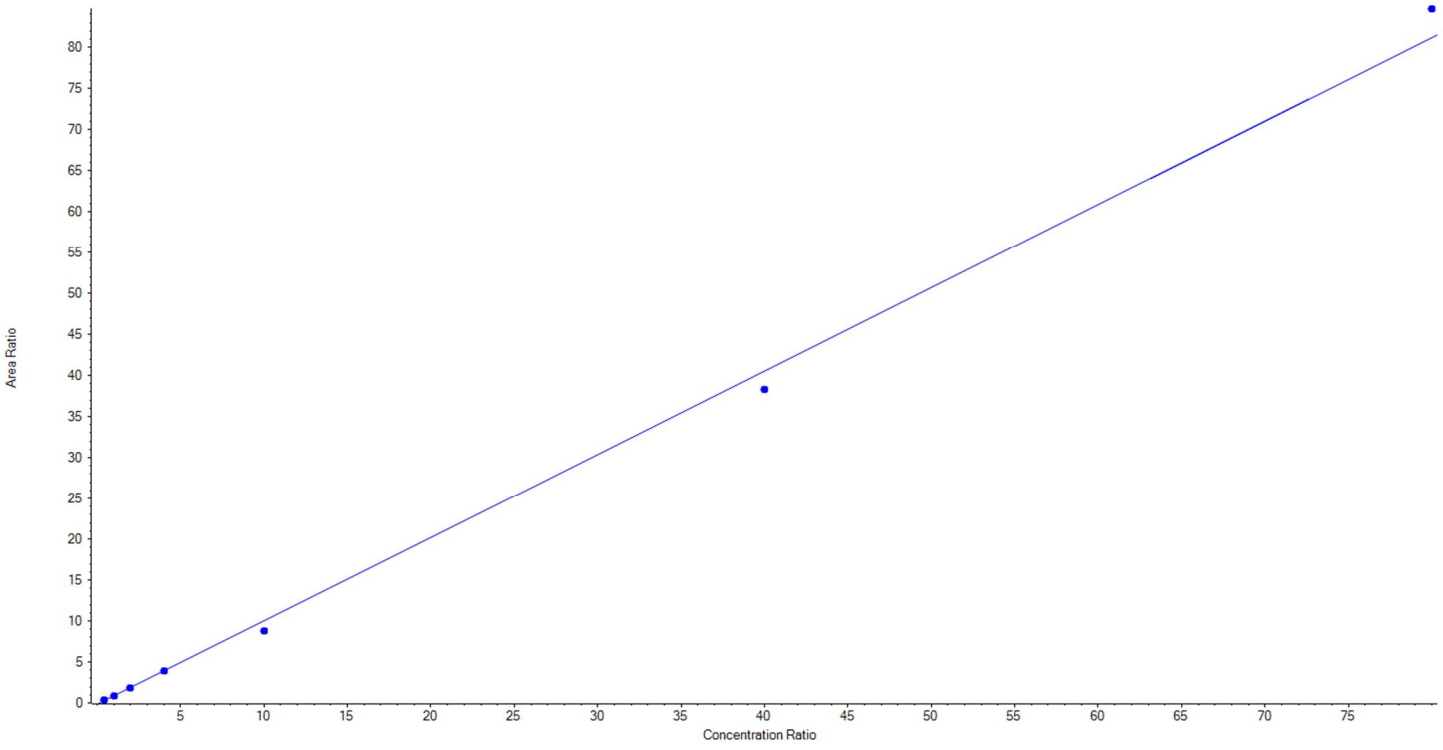
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Analyte Name	NEtFOSAA_1	**Data File**	18-0585_18-0583.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.01615 x + -0.12499 (r = 0.99829) (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	115.264032	115.3
3	KB74	L2	True	250.00	253.235603	101.3
4	KB75	L3	True	500.00	482.878951	96.6
5	KB76	L4	True	1000.00	1003.840402	100.4
6	KB77	L5	True	2500.00	2193.919219	87.8
7	KB78	L6	True	10000.00	9444.163786	94.4
8	KB79	L7	True	20000.00	20856.698006	104.3



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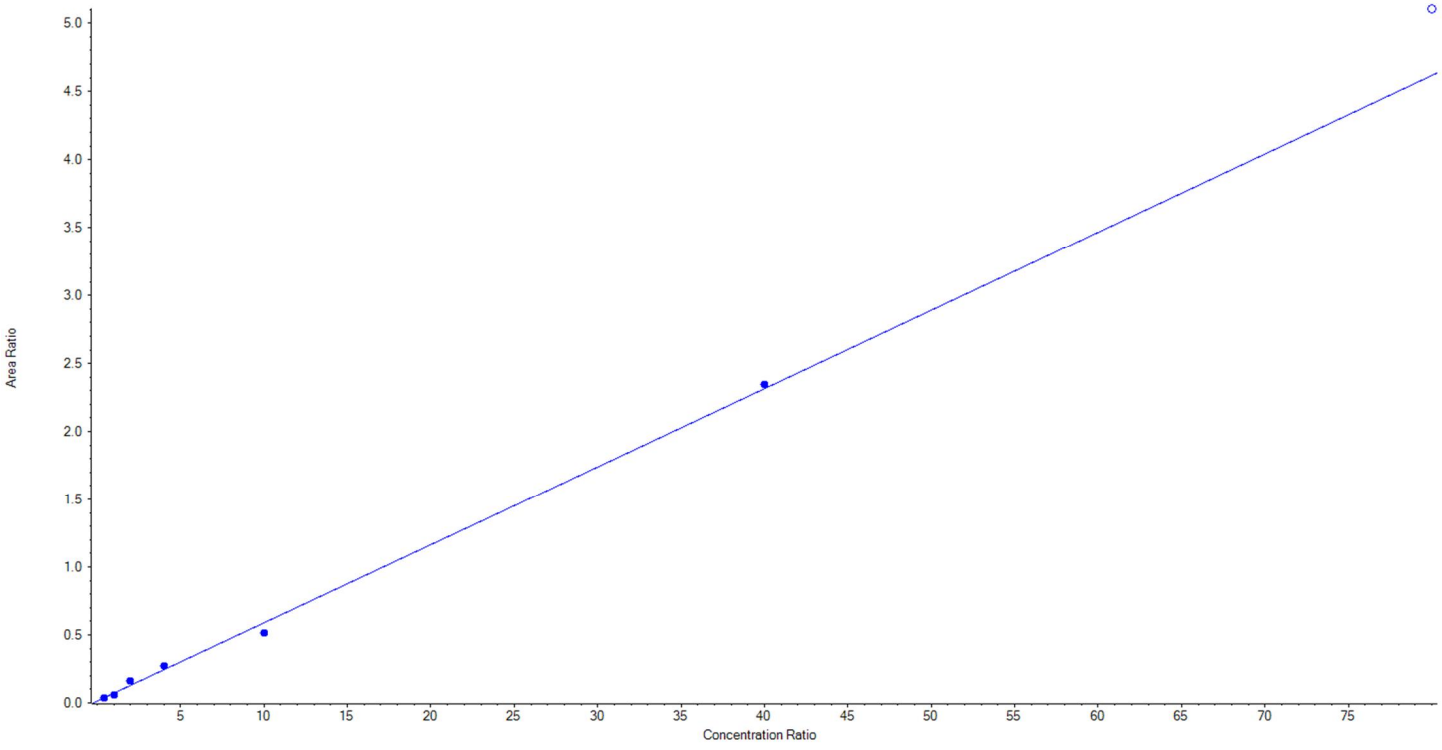
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Analyte Name	NEtFOSAA_2	**Data File**	18-0585_18-0583.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0585_18-0583_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05754 x + 0.01392 (r = 0.99543) (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	92.096020	92.1
3	KB74	L2	True	250.00	197.427076	79.0
4	KB75	L3	True	500.00	649.935419	130.0
5	KB76	L4	True	1000.00	1107.750721	110.8
6	KB77	L5	True	2500.00	2171.436204	86.9
7	KB78	L6	True	10000.00	10131.354561	101.3
8	KB79	L7	False	20000.00	22119.823543	110.6



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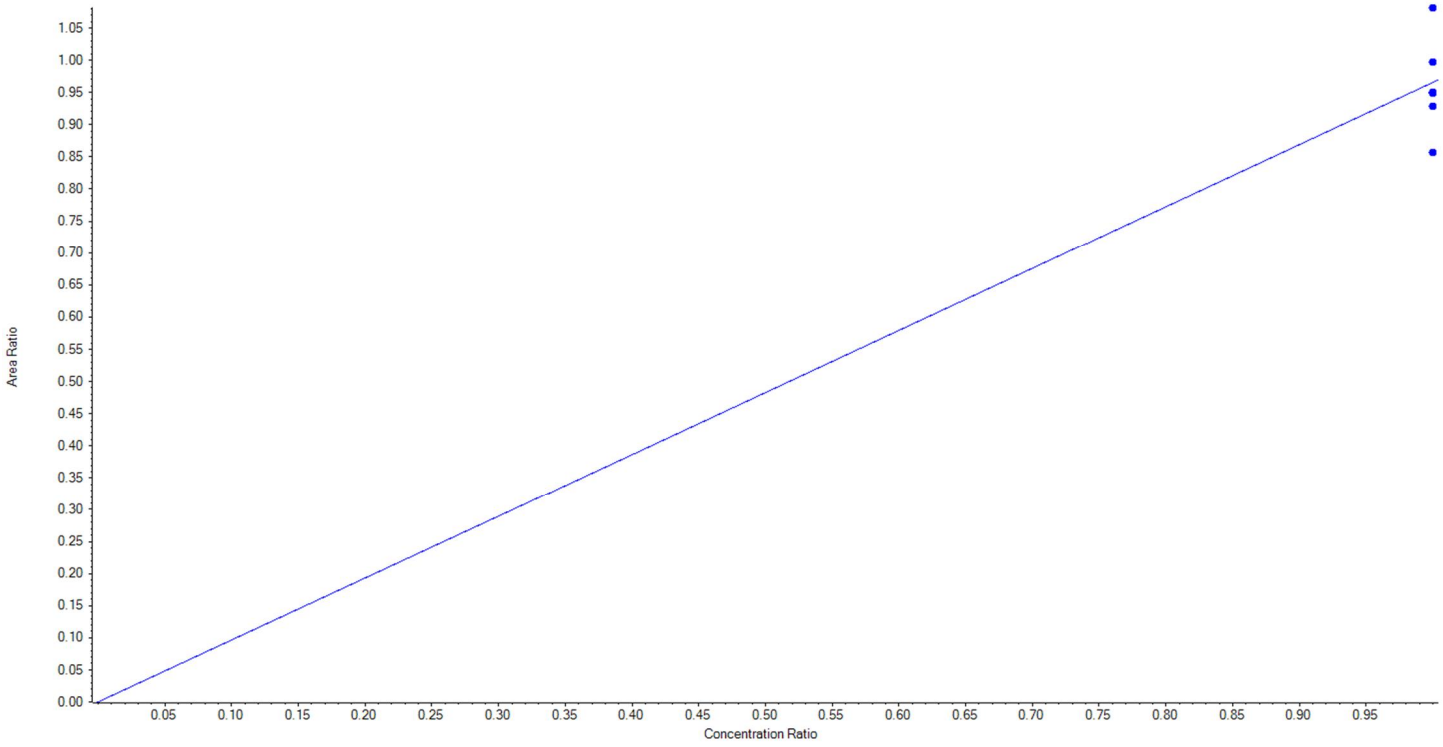
Calibration Summary Report

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Analyte Name	13C2-PFDoA	**Data File**	18-0585_18-0583.wiff
MRM Transition	615.0 / 570.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.96558 x (std. dev. = 0.06982) (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	258.078699	103.2
3	KB74	L2	True	250.00	258.307131	103.3
4	KB75	L3	True	250.00	221.653879	88.7
5	KB76	L4	True	250.00	240.469815	96.2
6	KB77	L5	True	250.00	245.586916	98.2
7	KB78	L6	True	250.00	245.967877	98.4
8	KB79	L7	True	250.00	279.935683	112.0



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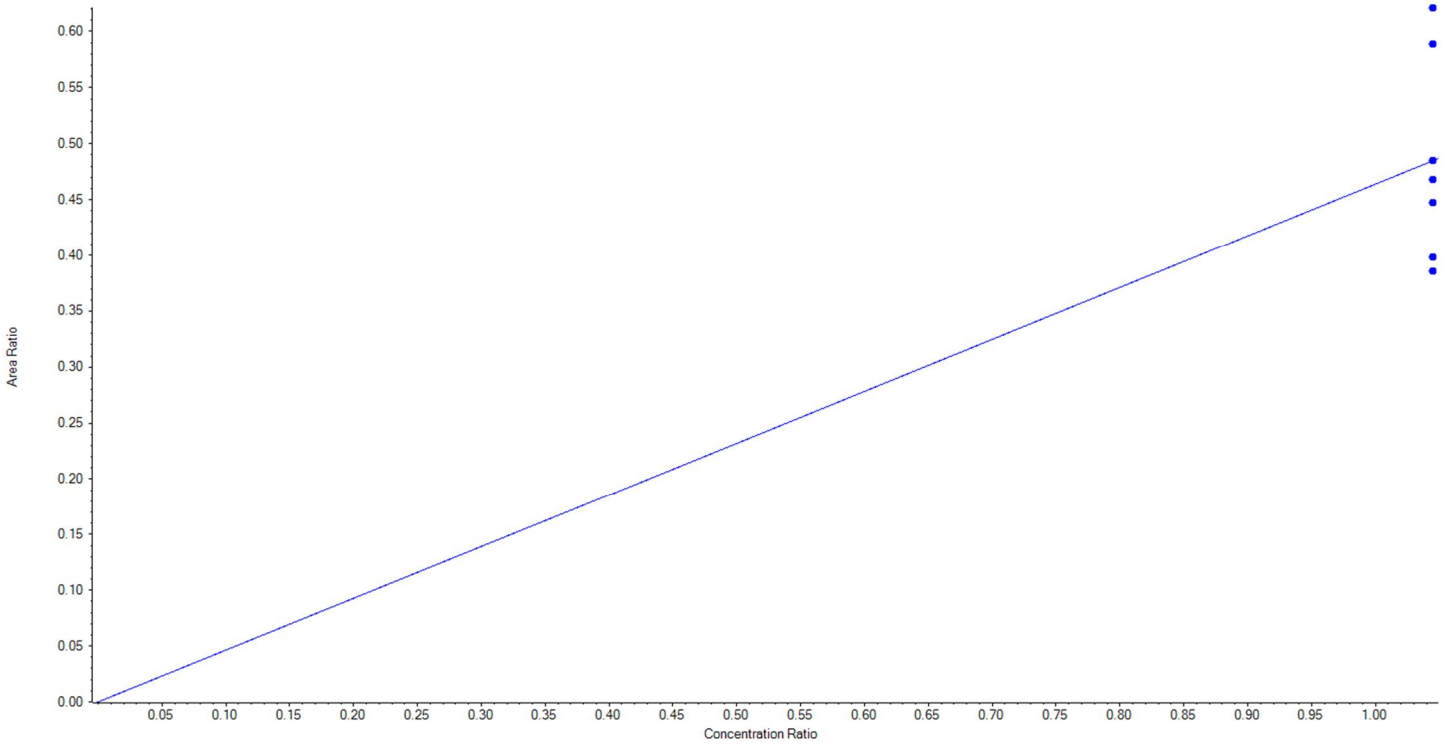
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Analyte Name	d3-MeFOSAA	**Data File**	18-0585_18-0583.wiff
MRM Transition	573.0 / 419.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.46391 x (std. dev. = 0.08601) (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	250.221707	100.1
3	KB74	L2	True	250.00	205.301118	82.1
4	KB75	L3	True	250.00	198.766210	79.5
5	KB76	L4	True	250.00	241.154226	96.5
6	KB77	L5	True	250.00	230.650075	92.3
7	KB78	L6	True	250.00	303.640786	121.5
8	KB79	L7	True	250.00	320.265877	128.1



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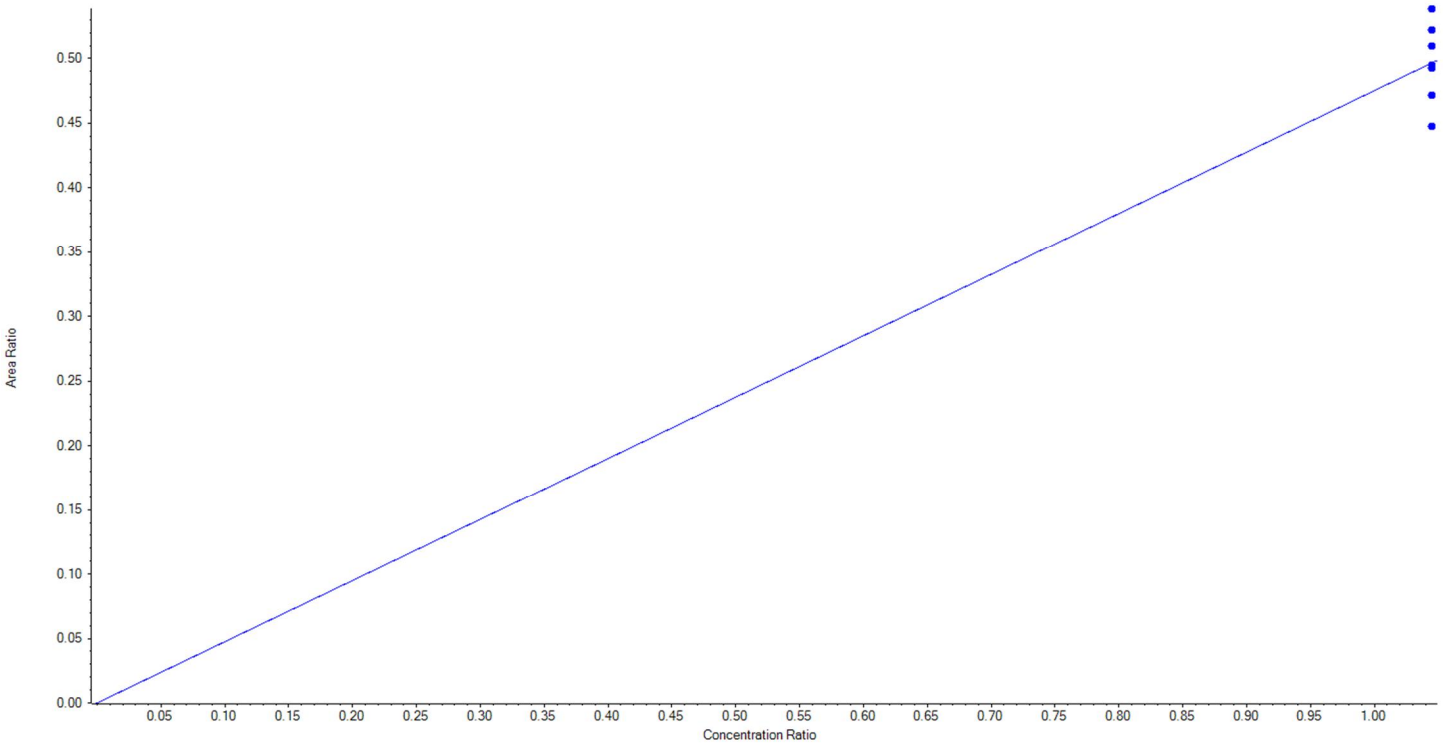
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Analyte Name	d5-EtFOSAA	**Data File**	18-0585_18-0583.wiff
MRM Transition	589.0 / 419.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.47521 x (std. dev. = 0.02922) (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	262.671199	105.1
3	KB74	L2	True	250.00	237.307222	94.9
4	KB75	L3	True	250.00	271.025032	108.4
5	KB76	L4	True	250.00	256.474822	102.6
6	KB77	L5	True	250.00	249.106946	99.6
7	KB78	L6	True	250.00	248.070447	99.2
8	KB79	L7	True	250.00	225.344333	90.1



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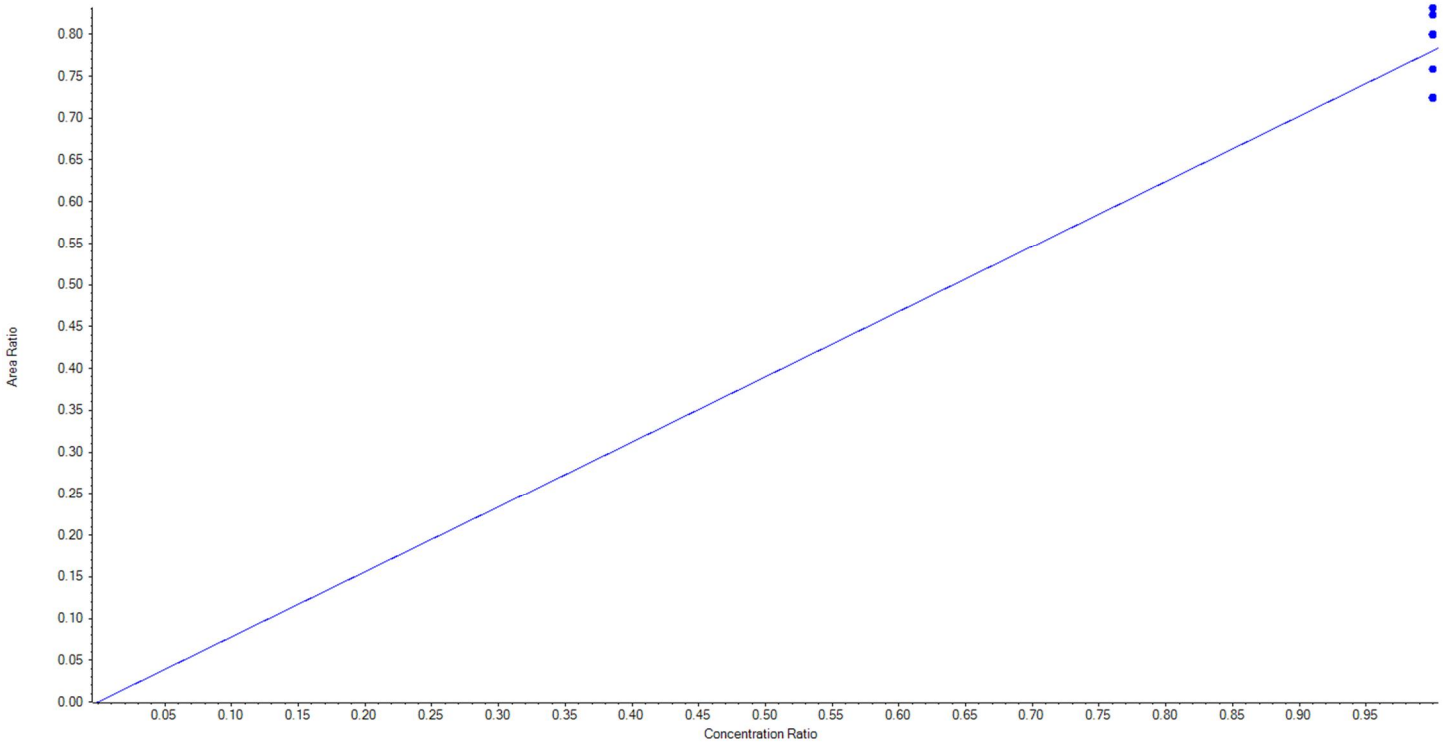
Calibration Summary Report

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Printed: 17/10/2018 11:29:26 AM

Analyte Name	13C5-PFHxA	**Data File**	18-0585_18-0583.wiff
MRM Transition	318.0 / 273.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.78028 x (std. dev. = 0.04458) (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	243.049455	97.2
3	KB74	L2	True	250.00	256.364104	102.6
4	KB75	L3	True	250.00	232.024639	92.8
5	KB76	L4	True	250.00	263.859828	105.5
6	KB77	L5	True	250.00	232.257516	92.9
7	KB78	L6	True	250.00	266.379146	106.6
8	KB79	L7	True	250.00	256.065312	102.4



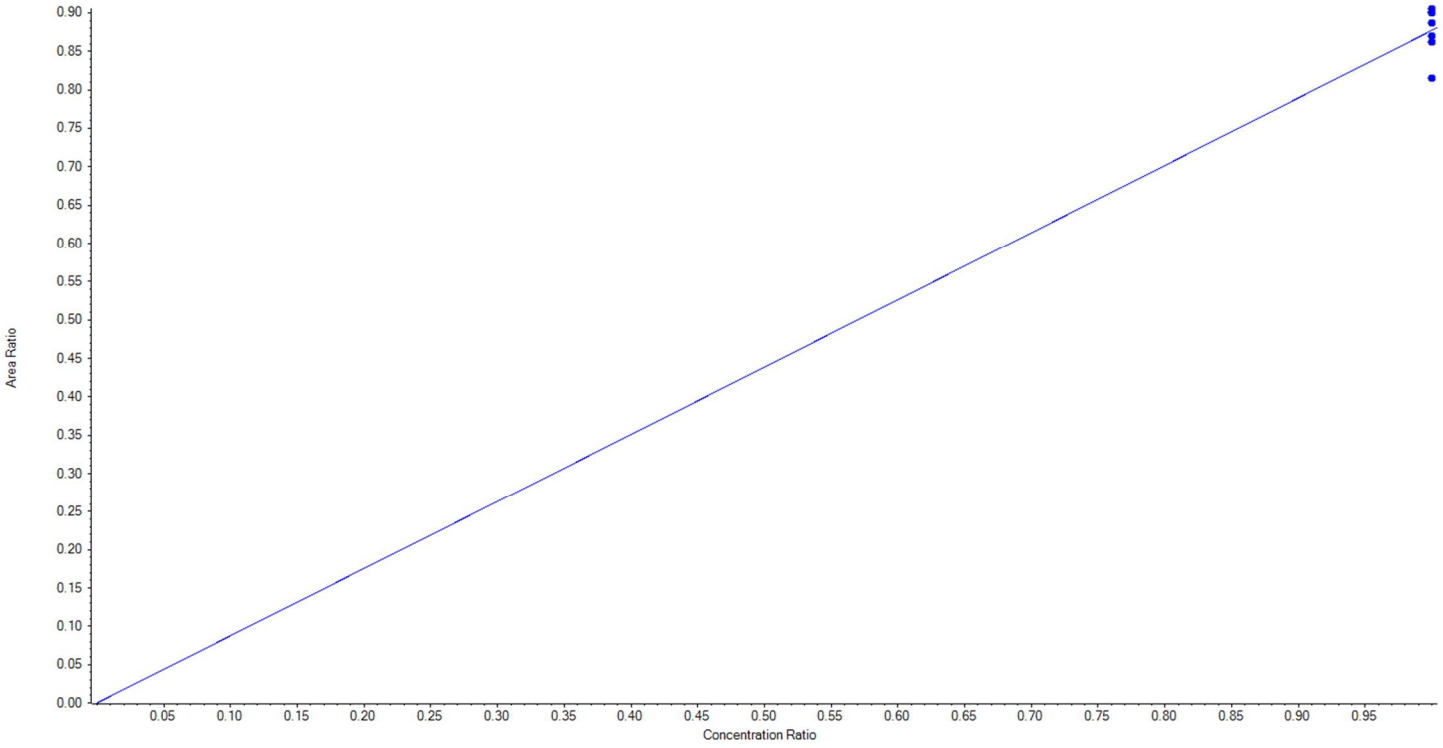
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Calibration Summary Report

Analyte Name	13C4-PFHpA	**Data File**	18-0585_18-0583.wiff
MRM Transition	367.0 / 322.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.87708 x (std. dev. = 0.03180) (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	252.883573	101.2
3	KB74	L2	True	250.00	245.667987	98.3
4	KB75	L3	True	250.00	256.806395	102.7
5	KB76	L4	True	250.00	257.959593	103.2
6	KB77	L5	True	250.00	232.320508	92.9
7	KB78	L6	True	250.00	256.309897	102.5
8	KB79	L7	True	250.00	248.052047	99.2



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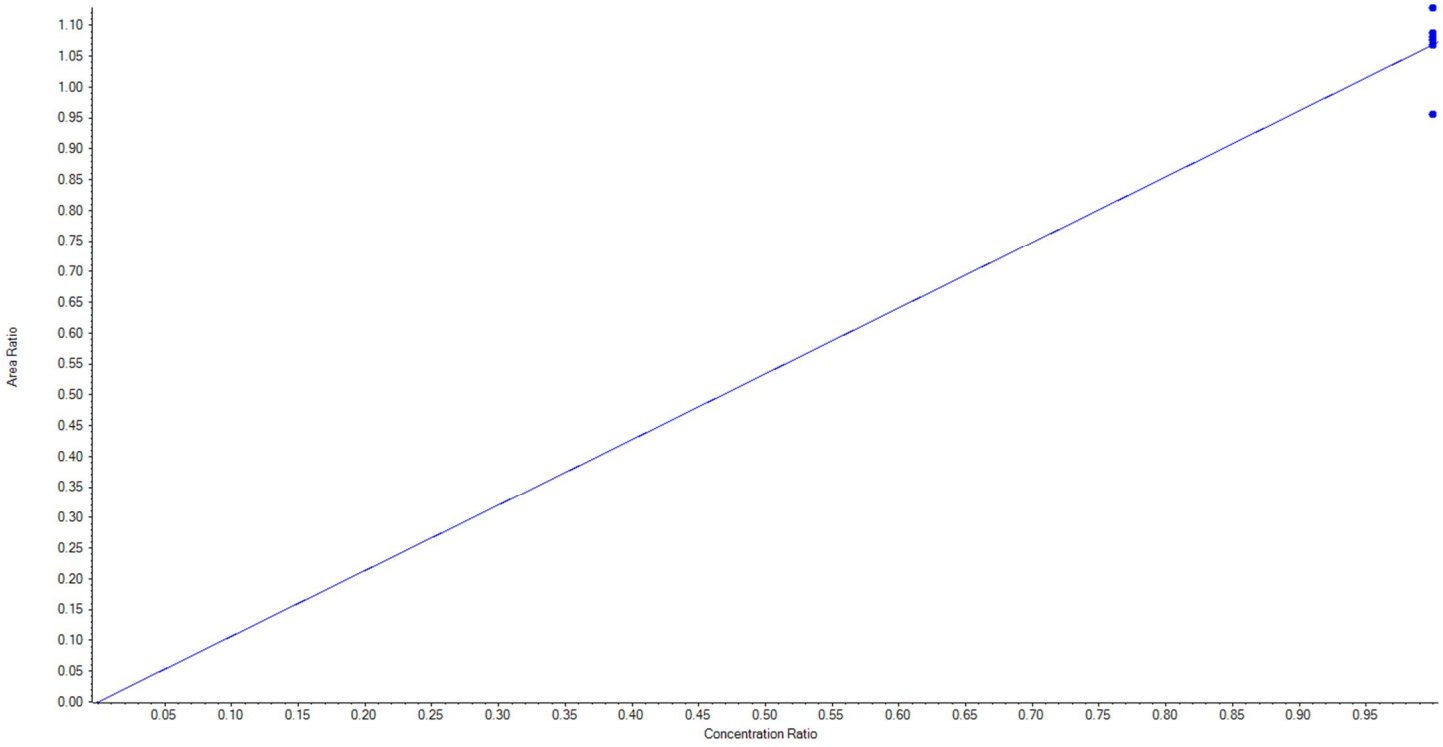
Calibration Summary Report

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Printed: 17/10/2018 11:29:26 AM

Analyte Name	13C8-PFOA	**Data File**	18-0585_18-0583.wiff
MRM Transition	421.0 / 376.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.06861 x (std. dev. = 0.05317) (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	251.823599	100.7
3	KB74	L2	True	250.00	253.123736	101.3
4	KB75	L3	True	250.00	263.971874	105.6
5	KB76	L4	True	250.00	254.573472	101.8
6	KB77	L5	True	250.00	249.849396	99.9
7	KB78	L6	True	250.00	252.933954	101.2
8	KB79	L7	True	250.00	223.723969	89.5



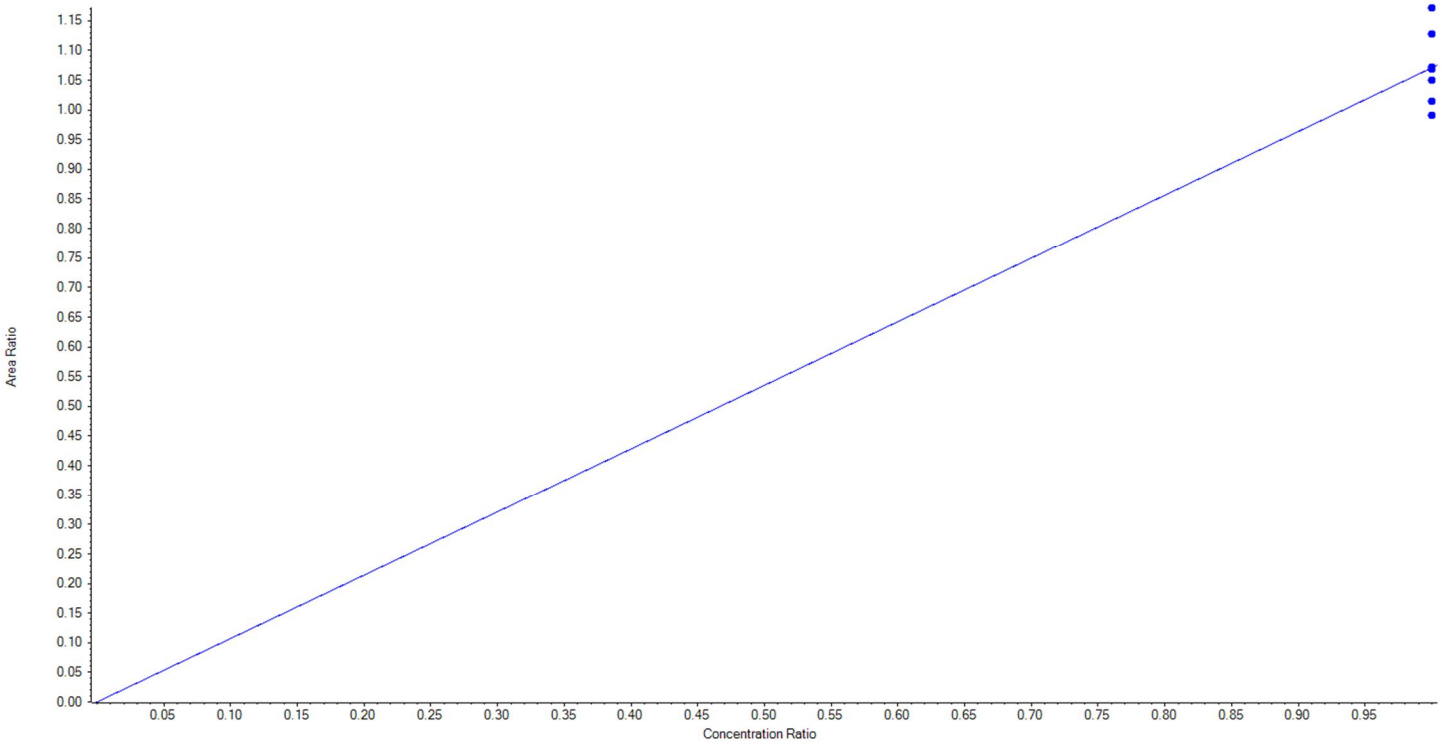
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Calibration Summary Report

Analyte Name	13C9-PFNA	**Data File**	18-0585_18-0583.wiff
MRM Transition	472.0 / 427.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.07066 x (std. dev. = 0.06241) (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	231.215140	92.5
3	KB74	L2	True	250.00	250.329357	100.1
4	KB75	L3	True	250.00	245.163086	98.1
5	KB76	L4	True	250.00	249.441918	99.8
6	KB77	L5	True	250.00	237.044809	94.8
7	KB78	L6	True	250.00	273.523216	109.4
8	KB79	L7	True	250.00	263.282474	105.3



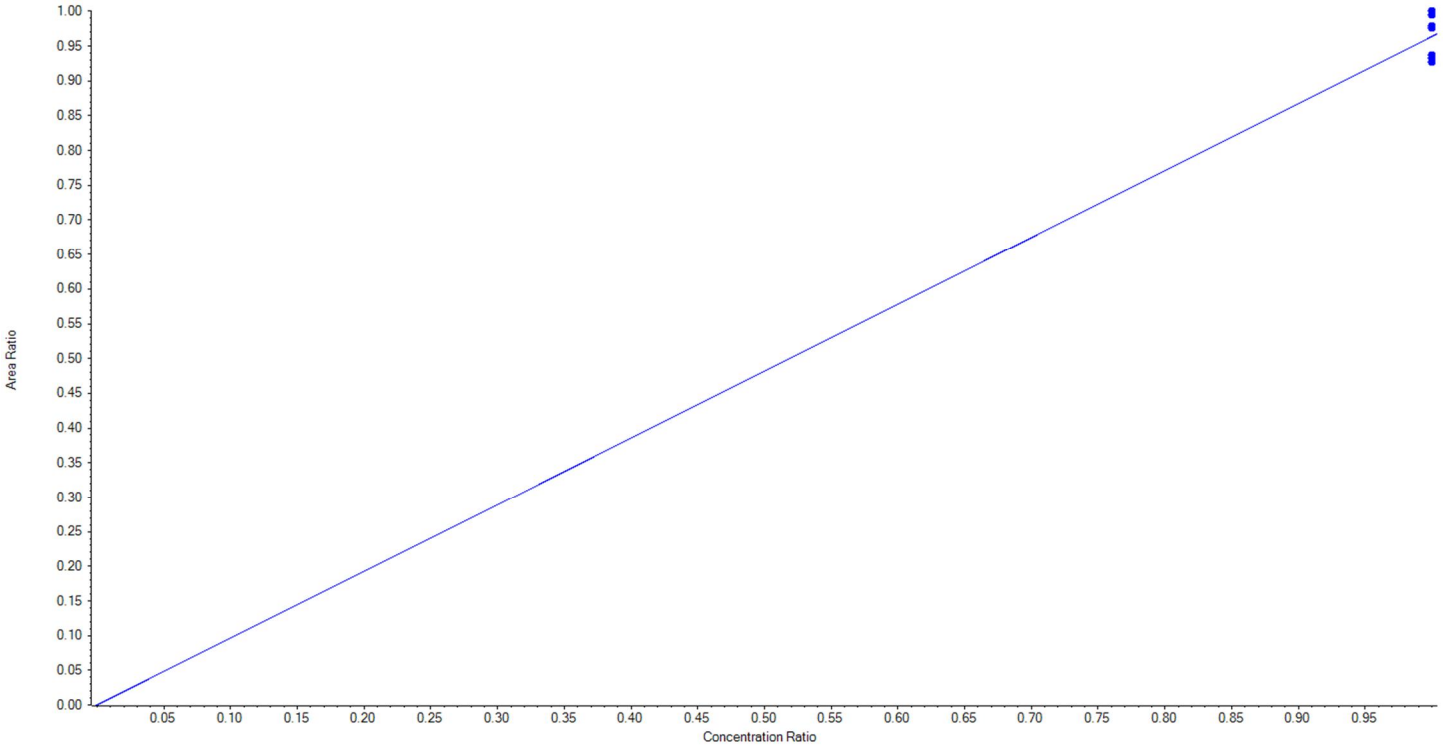
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Calibration Summary Report

Analyte Name	13C6-PFDA	**Data File**	18-0585_18-0583.wiff
MRM Transition	519.0 / 474.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.96379 x (std. dev. = 0.03115) (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	259.534461	103.8
3	KB74	L2	True	250.00	253.835780	101.5
4	KB75	L3	True	250.00	241.825547	96.7
5	KB76	L4	True	250.00	253.336528	101.3
6	KB77	L5	True	250.00	258.120569	103.3
7	KB78	L6	True	250.00	243.017669	97.2
8	KB79	L7	True	250.00	240.329447	96.1



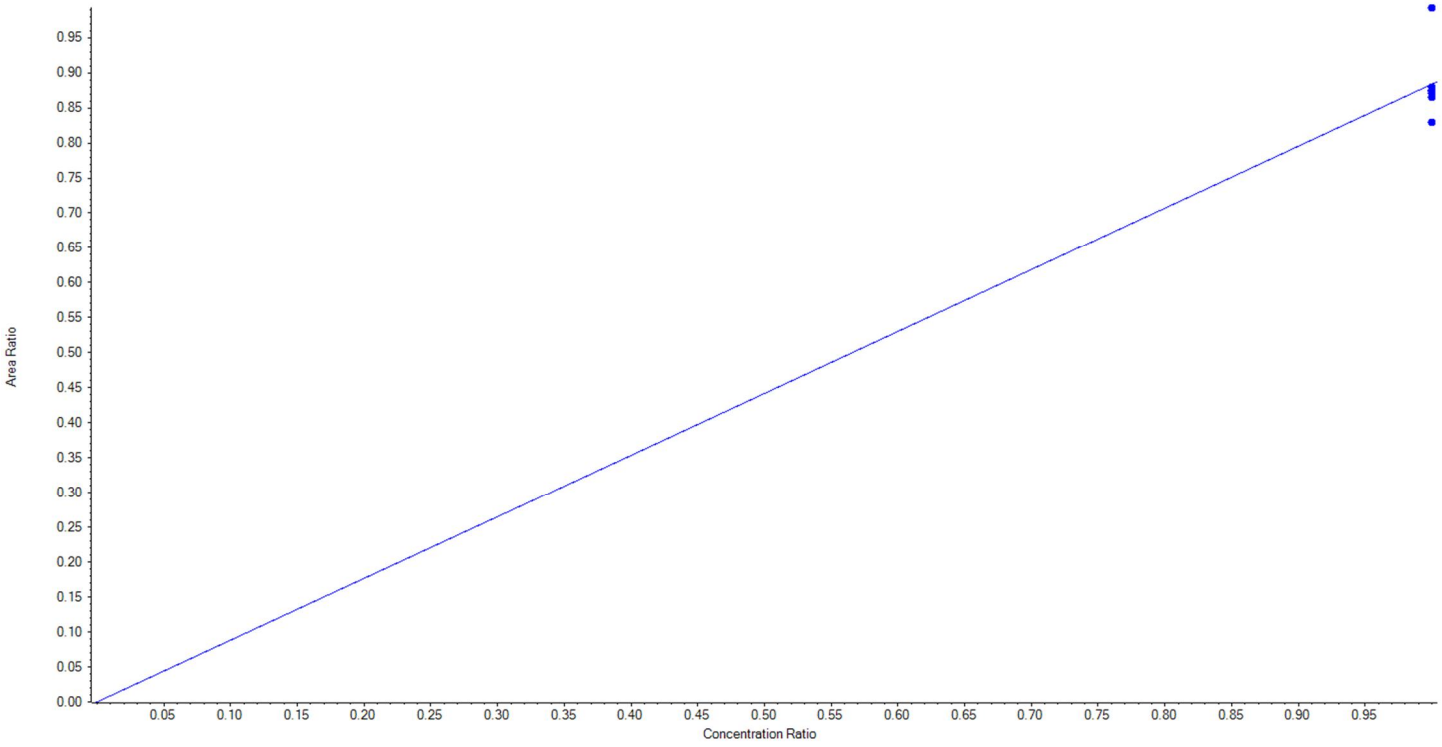
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Calibration Summary Report

Analyte Name	13C7-PFUnA	**Data File**	18-0585_18-0583.wiff
MRM Transition	570.0 / 525.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.88383 x (std. dev. = 0.05087) (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	244.672187	97.9
3	KB74	L2	True	250.00	280.719213	112.3
4	KB75	L3	True	250.00	247.689949	99.1
5	KB76	L4	True	250.00	234.419788	93.8
6	KB77	L5	True	250.00	246.398664	98.6
7	KB78	L6	True	250.00	247.157644	98.9
8	KB79	L7	True	250.00	248.942556	99.6



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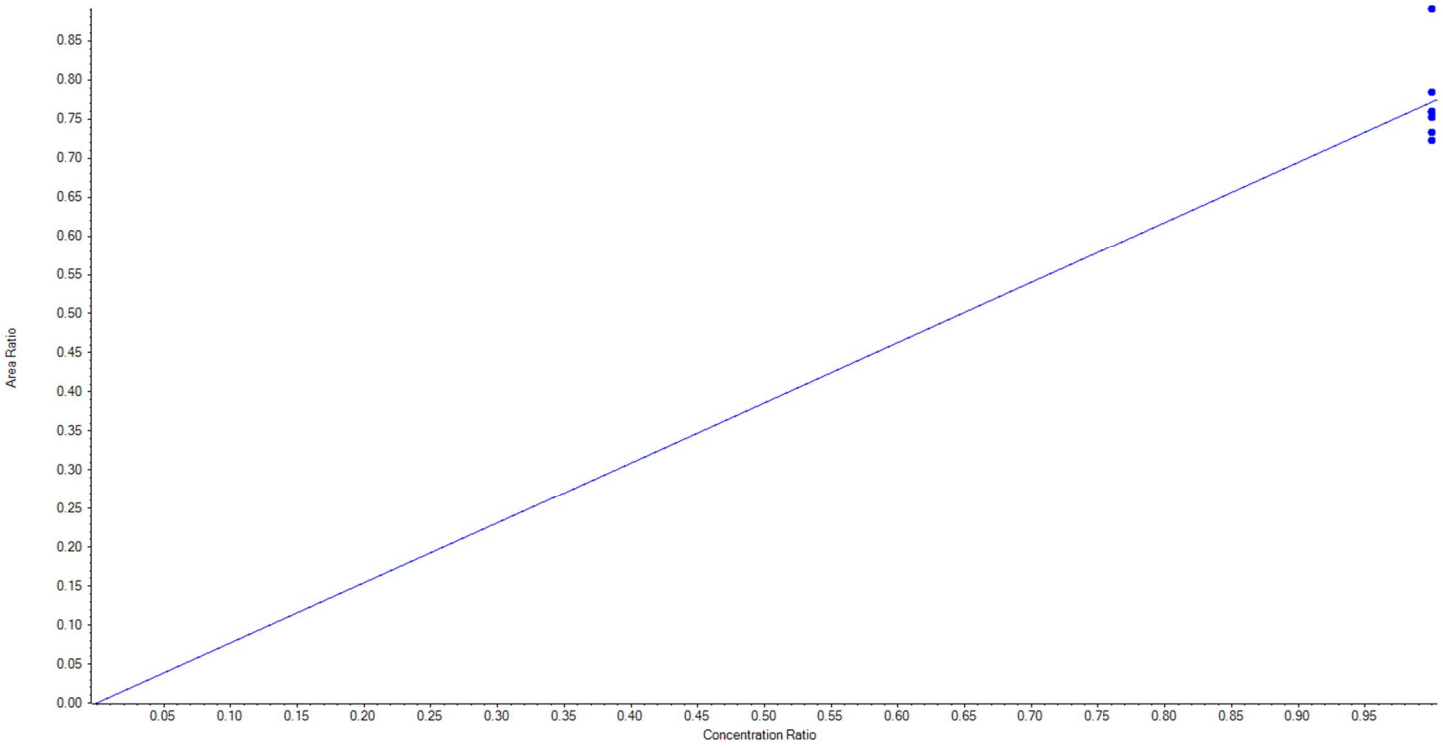
Calibration Summary Report

Created with Analyst Reporter
Printed: 17/10/2018 11:29:26 AM

Analyte Name	13C2-PFTeDA	**Data File**	18-0585_18-0583.wiff
MRM Transition	715.0 / 670.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.77183 x (std. dev. = 0.05603) (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	245.534303	98.2
3	KB74	L2	True	250.00	253.984041	101.6
4	KB75	L3	True	250.00	234.263449	93.7
5	KB76	L4	True	250.00	246.247279	98.5
6	KB77	L5	True	250.00	237.610301	95.0
7	KB78	L6	True	250.00	243.798491	97.5
8	KB79	L7	True	250.00	288.562136	115.4



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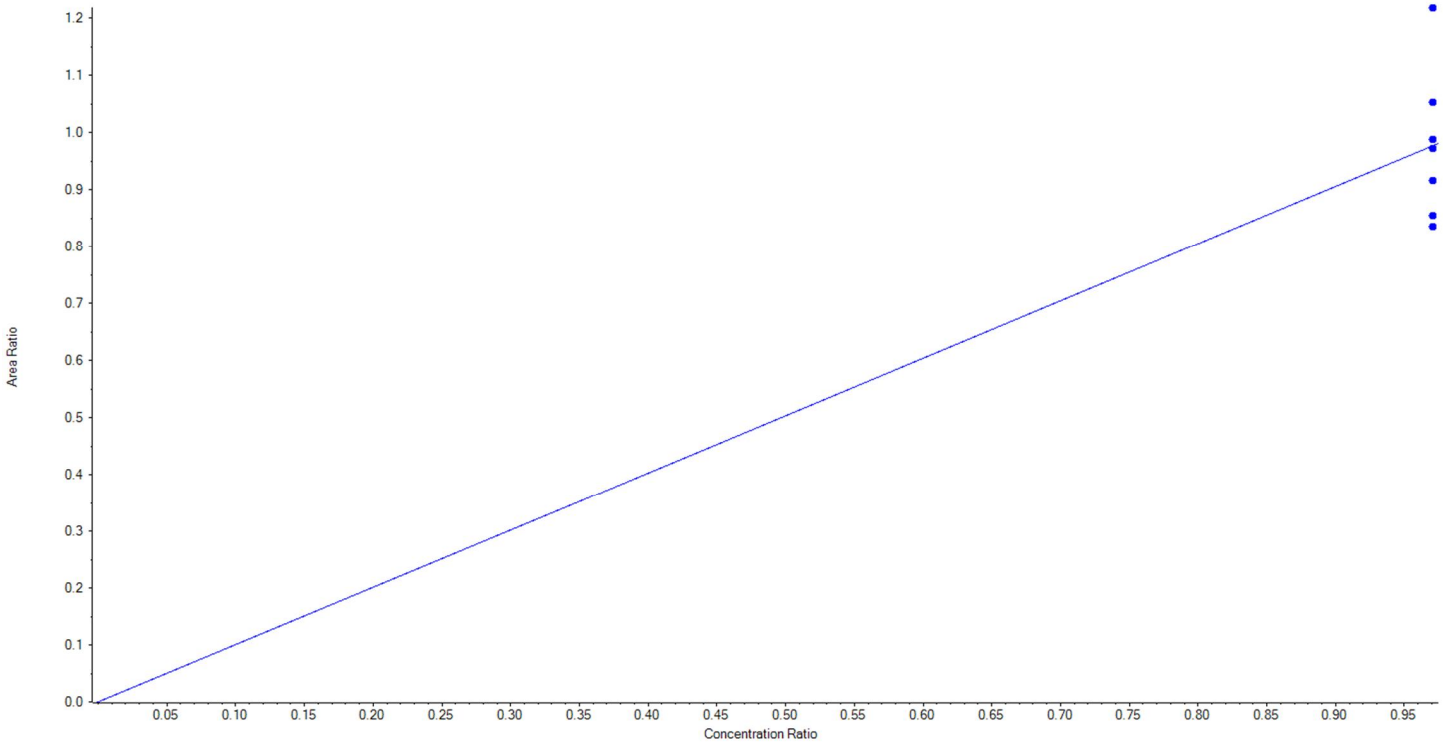
Calibration Summary Report

Created with Analyst Reporter
Printed: 17/10/2018 11:29:26 AM

Analyte Name	13C3-PFBS	**Data File**	18-0585_18-0583.wiff
MRM Transition	302.0 / 99.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.00665 x (std. dev. = 0.13468) (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	231.116682	99.5
3	KB74	L2	True	232.25	198.718979	85.6
4	KB75	L3	True	232.25	203.165718	87.5
5	KB76	L4	True	232.25	235.012505	101.2
6	KB77	L5	True	232.25	217.904512	93.8
7	KB78	L6	True	232.25	250.286360	107.8
8	KB79	L7	True	232.25	289.545243	124.7



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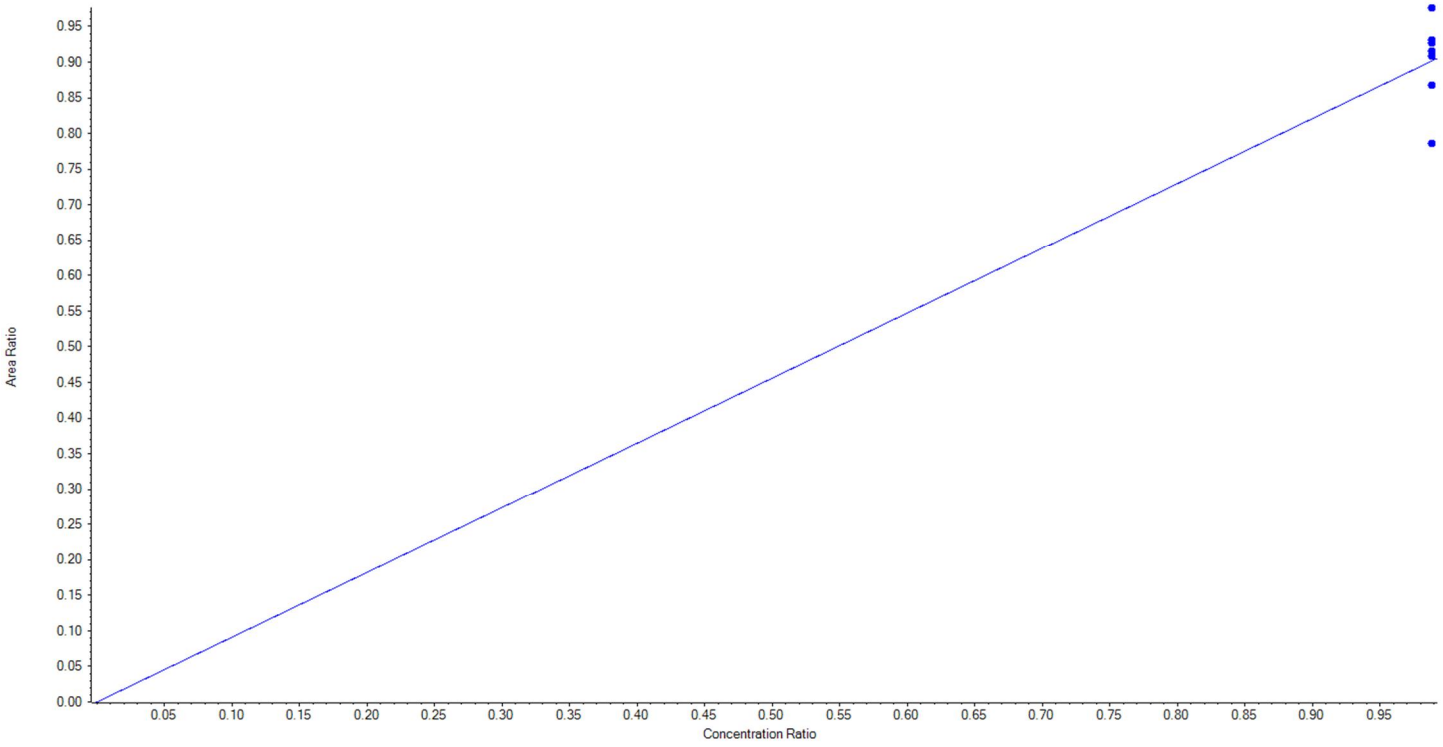
Calibration Summary Report

Created with Analyst Reporter
Printed: 17/10/2018 11:29:26 AM

Analyte Name	13C3-PFHxS	**Data File**	18-0585_18-0583.wiff
MRM Transition	402.0 / 99.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.91206 x (std. dev. = 0.06076) (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	256.001632	108.3
3	KB74	L2	True	236.50	238.472453	100.8
4	KB75	L3	True	236.50	227.443232	96.2
5	KB76	L4	True	236.50	243.058192	102.8
6	KB77	L5	True	236.50	206.336677	87.3
7	KB78	L6	True	236.50	240.129280	101.5
8	KB79	L7	True	236.50	244.058536	103.2



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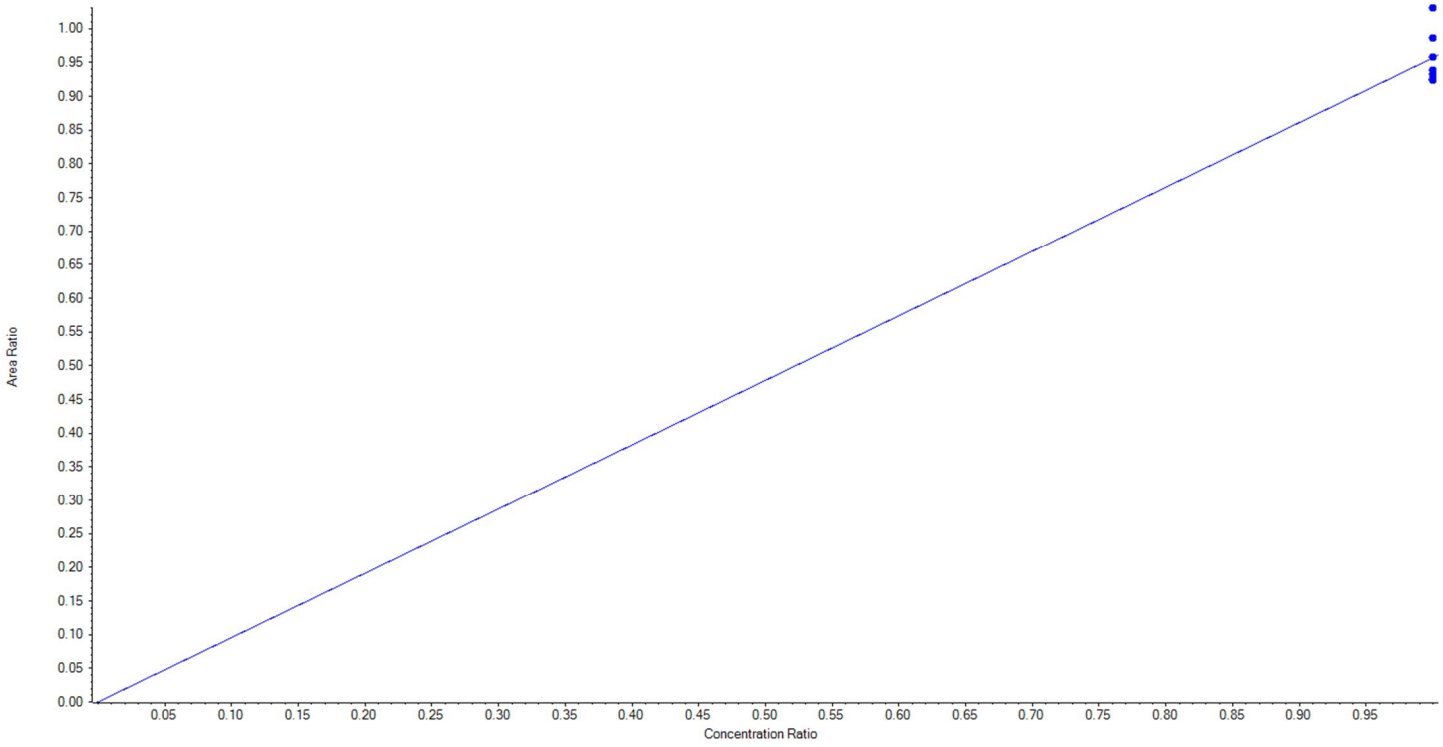
Calibration Summary Report

Created with Analyst Reporter
Printed: 17/10/2018 11:29:26 AM

Analyte Name	13C8-PFOS	**Data File**	18-0585_18-0583.wiff
MRM Transition	507.0 / 99.0	**Result Table**	18-0585_18-0583_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/14/2018 12:14:09 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.95667 x (std. dev. = 0.03926) (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	239.624764	100.2
3	KB74	L2	True	239.25	231.522846	96.8
4	KB75	L3	True	239.25	234.883127	98.2
5	KB76	L4	True	239.25	246.671377	103.1
6	KB77	L5	True	239.25	233.143125	97.5
7	KB78	L6	True	239.25	231.168064	96.6
8	KB79	L7	True	239.25	257.736698	107.7



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	Isotope Dilution Calibration Curve Concentrations (ng/L)						
	KB73	KB74	KB75	KB76	KB77	KB78	KB79
PFBA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFPeA	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHxA	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFNA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFUnA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDoA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTrDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFTeDA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NMeFOSAA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
NEtFOSAA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOSA	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFBS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFPeS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFHxS (Branched)	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFHpS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFOS (Branched)	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
PFDS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
PFNS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
4:2FTS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
6:2FTS	100.00	250.00	500.00	1,000.00	2,500.00	10,000.00	20,000.00
8:2FTS	101.00	252.50	505.00	1,010.00	2,525.00	10,100.00	20,200.00
	Surrogates / Extracted Internal Standards						
13C4-PFBA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C5-PFPeA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C5-PFHxA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C4-PFHpA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C8-PFOA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C9-PFNA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C6-PFDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C7-PFUnA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFDoA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFTeDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
d3-MeFOSAA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
d5-EtFOSAA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C8-FOSA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C3-PFBS	232.25	232.25	232.25	232.25	232.25	232.25	232.25
13C3-PFHxS	236.50	236.50	236.50	236.50	236.50	236.50	236.50
13C8-PFOS	239.25	239.25	239.25	239.25	239.25	239.25	239.25
13C2-4:2FTS	233.75	233.75	233.75	233.75	233.75	233.75	233.75
13C2-6:2FTS	237.25	237.25	237.25	237.25	237.25	237.25	237.25
13C2-8:2FTS	239.50	239.50	239.50	239.50	239.50	239.50	239.50
	Internal Standards						
13C3-PFBA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFOA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C2-PFDA	250.00	250.00	250.00	250.00	250.00	250.00	250.00
13C4-PFOS	239.25	239.25	239.25	239.25	239.25	239.25	239.25

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Summary Quant Report

Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:25:01	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	34121.38	100.508541	87.4	true
PFBS_2	298.9 / 99.0	1.54	11376.82	104.973014	49.2	true
PFHxA_1	313.0 / 269.0	1.86	29559.44	108.810616	8.6	false
PFHxA_2	313.0 / 119.0	1.86	1820.55	96.626394	5.0	true
PFHpA_1	363.0 / 319.0	2.27	27461.51	109.378901	32.5	false
PFHpA_2	363.0 / 169.0	2.28	452.16	87.419215	16.3	false
PFHxS_1	399.0 / 80.0	2.30	41548.97	98.667560	105.3	false
PFHxS_2	399.0 / 99.0	2.30	12342.77	103.341956	121.9	false
PFOA_1	413.0 / 369.0	2.68	37502.72	108.562585	80.7	false
PFOA_2	413.0 / 169.0	2.68	3242.22	186.082953	93.9	false
PFNA_1	463.0 / 419.0	3.09	35504.93	84.547360	93.2	false
PFNA_2	463.0 / 219.0	3.08	11275.60	90.726226	104.2	false
PFOS_1	499.0 / 80.0	3.08	58322.66	107.416508	88.8	false
PFOS_2	499.0 / 99.0	3.08	11449.55	99.944163	130.2	false
PFDA_1	513.0 / 469.0	3.44	40465.96	103.005915	134.2	false
PFDA_2	513.0 / 219.0	3.45	1529.84	87.993271	43.2	false
PFUnA_1	563.0 / 519.0	3.77	34250.97	107.476986	120.9	false
PFUnA_2	563.0 / 269.0	3.77	1857.80	18.012950	52.7	false
PFDoA_1	613.0 / 569.0	4.05	35536.85	89.096034	179.1	false
PFDoA_2	613.0 / 319.0	4.05	5633.28	83.834610	135.3	false
PFTrDA_1	663.0 / 619.0	4.30	32085.90	88.381710	301.9	false
PFTrDA_2	663.0 / 169.0	4.29	2075.19	74.946847	90.4	false
PFTeDA_1	713.0 / 669.0	4.52	35121.14	85.190698	429.9	false
PFTeDA_2	713.0 / 169.0	4.52	1897.16	84.195949	187.8	false
NMeFOSAA_1	570.0 / 419.0	3.60	7195.58	71.469191	446.1	false
NMeFOSAA_2	570.0 / 512.0	3.60	2702.54	< 0	119.0	false
NEtFOSAA_1	584.0 / 419.0	3.76	4869.54	115.264032	180.3	false
NEtFOSAA_2	584.0 / 483.0	3.75	497.78	92.096020	46.2	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	2018-10-14T12:35:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	82732.42	250.634359	162.2	false
PFBS_2	298.9 / 99.0	1.54	23697.79	232.586481	112.3	false
PFHxA_1	313.0 / 269.0	1.86	69428.44	255.441826	18.7	false
PFHxA_2	313.0 / 119.0	1.86	5603.61	291.668576	12.0	false
PFHpA_1	363.0 / 319.0	2.27	61416.89	250.531214	55.5	false
PFHpA_2	363.0 / 169.0	2.27	1327.29	272.137525	33.5	false
PFHxS_1	399.0 / 80.0	2.29	105000.38	237.672593	152.4	false
PFHxS_2	399.0 / 99.0	2.29	31173.21	247.818105	181.9	false
PFOA_1	413.0 / 369.0	2.68	94146.10	261.629716	138.0	false
PFOA_2	413.0 / 169.0	2.69	4825.84	254.066051	117.9	false
PFNA_1	463.0 / 419.0	3.08	94261.15	267.106975	179.6	false
PFNA_2	463.0 / 219.0	3.08	27761.70	256.353586	161.4	false
PFOS_1	499.0 / 80.0	3.08	145680.43	238.845452	127.7	false
PFOS_2	499.0 / 99.0	3.08	27853.85	239.211228	218.6	false
PFDA_1	513.0 / 469.0	3.44	97934.02	264.156573	187.1	false
PFDA_2	513.0 / 219.0	3.44	4695.51	311.243515	168.5	false
PFUnA_1	563.0 / 519.0	3.77	94347.62	251.685215	175.4	false
PFUnA_2	563.0 / 269.0	3.76	6111.17	242.887117	120.3	false
PFDoA_1	613.0 / 569.0	4.05	85968.05	249.033090	227.3	false
PFDoA_2	613.0 / 319.0	4.05	13378.00	242.468633	212.2	false
PFTrDA_1	663.0 / 619.0	4.30	79066.79	251.136552	360.0	false
PFTrDA_2	663.0 / 169.0	4.30	6052.65	294.577243	214.3	false
PFTeDA_1	713.0 / 669.0	4.52	90469.76	257.037481	605.7	false
PFTeDA_2	713.0 / 169.0	4.52	4614.68	266.758889	334.1	false
NMeFOSAA_1	570.0 / 419.0	3.59	13335.20	208.839498	296.2	false
NMeFOSAA_2	570.0 / 512.0	3.60	8842.89	181.382642	468.8	false
NEtFOSAA_1	584.0 / 419.0	3.76	14019.40	253.235603	277.0	false
NEtFOSAA_2	584.0 / 483.0	3.76	920.19	197.427076	209.0	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	2018-10-14T12:46:44	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	146376.08	532.234965	235.1	false
PFBS_2	298.9 / 99.0	1.55	44144.82	533.800722	167.4	false
PFHxA_1	313.0 / 269.0	1.87	113510.85	507.490422	24.1	false
PFHxA_2	313.0 / 119.0	1.87	7952.17	493.442238	14.8	false
PFHpA_1	363.0 / 319.0	2.28	108487.38	454.742181	71.3	false
PFHpA_2	363.0 / 169.0	2.27	2419.80	512.271480	54.3	false
PFHxS_1	399.0 / 80.0	2.30	173873.25	517.374784	277.8	false
PFHxS_2	399.0 / 99.0	2.30	46769.02	486.568925	261.7	false
PFOA_1	413.0 / 369.0	2.69	161721.14	458.025313	204.2	false
PFOA_2	413.0 / 169.0	2.69	9295.62	470.534982	181.3	false
PFNA_1	463.0 / 419.0	3.08	136937.83	449.487978	198.7	false
PFNA_2	463.0 / 219.0	3.08	44613.37	482.614568	211.4	false
PFOS_1	499.0 / 80.0	3.08	243614.10	486.328897	174.6	false
PFOS_2	499.0 / 99.0	3.08	48507.55	530.318821	246.8	false
PFDA_1	513.0 / 469.0	3.44	168873.67	483.725734	238.3	false
PFDA_2	513.0 / 219.0	3.44	6929.02	490.024516	166.0	false
PFUnA_1	563.0 / 519.0	3.77	151166.34	453.977887	206.7	false
PFUnA_2	563.0 / 269.0	3.77	9133.56	481.959008	152.6	false
PFDoA_1	613.0 / 569.0	4.05	148418.75	526.324928	269.5	false
PFDoA_2	613.0 / 319.0	4.05	24481.65	554.769739	256.3	false
PFTrDA_1	663.0 / 619.0	4.30	141547.97	516.237138	463.5	false
PFTrDA_2	663.0 / 169.0	4.30	8945.39	498.914182	191.3	false
PFTeDA_1	713.0 / 669.0	4.52	155254.62	504.798334	759.6	false
PFTeDA_2	713.0 / 169.0	4.52	7111.52	480.306995	328.4	false
NMeFOSAA_1	570.0 / 419.0	3.60	24954.41	595.249399	291.6	true
NMeFOSAA_2	570.0 / 512.0	3.60	14566.03	556.562411	258.0	false
NEtFOSAA_1	584.0 / 419.0	3.76	27028.98	482.878951	374.9	false
NEtFOSAA_2	584.0 / 483.0	3.76	2404.73	649.935419	199.6	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	2018-10-14T12:57:36	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	317369.24	975.854331	410.9	false
PFBS_2	298.9 / 99.0	1.55	94000.04	968.926964	267.2	false
PFHxA_1	313.0 / 269.0	1.87	234193.92	897.348485	39.2	false
PFHxA_2	313.0 / 119.0	1.87	17169.19	907.899027	24.8	false
PFHpA_1	363.0 / 319.0	2.28	241015.82	971.695242	122.2	false
PFHpA_2	363.0 / 169.0	2.28	4690.26	956.361339	84.7	false
PFHxS_1	399.0 / 80.0	2.30	365087.93	989.008162	380.4	false
PFHxS_2	399.0 / 99.0	2.30	103147.31	978.578682	556.6	false
PFOA_1	413.0 / 369.0	2.69	353405.29	995.677222	292.6	false
PFOA_2	413.0 / 169.0	2.69	22086.27	1072.350826	278.3	false
PFNA_1	463.0 / 419.0	3.09	338237.12	1111.820340	351.7	false
PFNA_2	463.0 / 219.0	3.09	95433.78	1022.068861	357.2	false
PFOS_1	499.0 / 80.0	3.08	544732.00	994.580618	231.1	false
PFOS_2	499.0 / 99.0	3.08	93466.96	947.792019	347.8	false
PFDA_1	513.0 / 469.0	3.44	384108.61	984.480424	334.6	false
PFDA_2	513.0 / 219.0	3.45	15671.11	1000.887262	306.6	false
PFUnA_1	563.0 / 519.0	3.77	345037.14	1014.616700	294.9	false
PFUnA_2	563.0 / 269.0	3.77	17521.72	999.644410	170.4	false
PFDoA_1	613.0 / 569.0	4.05	331374.52	1029.973188	401.0	false
PFDoA_2	613.0 / 319.0	4.05	51594.39	1028.359731	380.6	false
PFTrDA_1	663.0 / 619.0	4.30	302243.30	1002.427883	649.0	false
PFTrDA_2	663.0 / 169.0	4.30	18729.97	963.859948	370.2	false
PFTeDA_1	713.0 / 669.0	4.51	348008.54	1031.897501	1009.8	false
PFTeDA_2	713.0 / 169.0	4.51	16510.32	1042.648241	554.8	false
NMeFOSAA_1	570.0 / 419.0	3.60	56726.34	1233.267050	935.9	true
NMeFOSAA_2	570.0 / 512.0	3.60	30041.54	1116.273104	311.4	false
NEtFOSAA_1	584.0 / 419.0	3.76	56533.60	1003.840402	532.0	false
NEtFOSAA_2	584.0 / 483.0	3.76	3842.98	1107.750721	279.8	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	2018-10-14T13:08:28	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	769469.74	2436.537610	675.7	false
PFBS_2	298.9 / 99.0	1.55	234574.65	2506.399166	631.1	false
PFHxA_1	313.0 / 269.0	1.86	569994.39	2554.105922	69.2	false
PFHxA_2	313.0 / 119.0	1.86	41525.96	2553.633299	48.5	false
PFHpA_1	363.0 / 319.0	2.27	554954.47	2533.494870	202.7	false
PFHpA_2	363.0 / 169.0	2.28	11110.22	2570.713799	202.9	false
PFHxS_1	399.0 / 80.0	2.30	899529.77	2757.432516	466.0	false
PFHxS_2	399.0 / 99.0	2.29	254144.71	2728.607961	520.7	false
PFOA_1	413.0 / 369.0	2.68	822738.44	2399.417317	443.1	false
PFOA_2	413.0 / 169.0	2.68	49365.58	2442.924402	346.0	false
PFNA_1	463.0 / 419.0	3.08	747825.23	2694.794754	440.6	false
PFNA_2	463.0 / 219.0	3.08	229915.67	2707.468474	528.3	false
PFOS_1	499.0 / 80.0	3.08	1291659.30	2419.142735	347.0	false
PFOS_2	499.0 / 99.0	3.08	234948.66	2478.331212	808.9	false
PFDA_1	513.0 / 469.0	3.44	905149.50	2440.339152	582.8	false
PFDA_2	513.0 / 219.0	3.44	33024.65	2228.683671	341.1	false
PFUnA_1	563.0 / 519.0	3.76	849755.26	2531.168763	433.1	false
PFUnA_2	563.0 / 269.0	3.76	44720.73	2754.364561	291.2	false
PFDoA_1	613.0 / 569.0	4.05	762841.22	2512.104680	507.0	false
PFDoA_2	613.0 / 319.0	4.05	120810.66	2563.459258	512.4	false
PFTrDA_1	663.0 / 619.0	4.30	707042.36	2642.100132	921.3	false
PFTrDA_2	663.0 / 169.0	4.30	46679.08	2738.938649	474.3	false
PFTeDA_1	713.0 / 669.0	4.52	795572.90	2656.331591	1687.6	false
PFTeDA_2	713.0 / 169.0	4.52	36992.56	2661.401828	934.2	false
NMeFOSAA_1	570.0 / 419.0	3.59	128671.19	2673.555867	690.2	true
NMeFOSAA_2	570.0 / 512.0	3.59	70316.14	2623.733926	509.9	false
NEtFOSAA_1	584.0 / 419.0	3.76	129275.26	2193.919219	658.5	false
NEtFOSAA_2	584.0 / 483.0	3.76	7552.45	2171.436204	642.4	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	2018-10-14T13:19:19	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	3639647.48	10551.026841	1770.6	false
PFBS_2	298.9 / 99.0	1.54	1087556.93	10669.903540	1426.4	false
PFHxA_1	313.0 / 269.0	1.87	2537107.36	10152.794039	116.5	false
PFHxA_2	313.0 / 119.0	1.87	183709.31	10066.268167	98.7	false
PFHpA_1	363.0 / 319.0	2.27	2405904.37	10160.014145	335.3	false
PFHpA_2	363.0 / 169.0	2.27	49527.78	10610.262033	308.8	false
PFHxS_1	399.0 / 80.0	2.30	3672070.68	10024.721431	1012.6	false
PFHxS_2	399.0 / 99.0	2.30	1034770.81	9894.381625	950.2	false
PFOA_1	413.0 / 369.0	2.69	3339565.37	9800.522459	821.5	false
PFOA_2	413.0 / 169.0	2.68	199653.22	9852.781134	653.7	false
PFNA_1	463.0 / 419.0	3.08	3165758.43	10205.443379	1107.1	false
PFNA_2	463.0 / 219.0	3.08	963898.98	10149.991831	910.9	false
PFOS_1	499.0 / 80.0	3.08	5410648.83	10607.466324	526.1	false
PFOS_2	499.0 / 99.0	3.08	974080.99	10824.623723	863.5	false
PFDA_1	513.0 / 469.0	3.44	3636310.90	9630.647919	756.9	false
PFDA_2	513.0 / 219.0	3.44	147623.10	9822.501680	542.5	false
PFUnA_1	563.0 / 519.0	3.77	3535598.17	9677.911533	606.4	false
PFUnA_2	563.0 / 269.0	3.77	163242.51	9491.720703	579.2	false
PFDoA_1	613.0 / 569.0	4.05	3456013.28	10565.379593	741.6	false
PFDoA_2	613.0 / 319.0	4.05	541648.94	10692.821021	693.7	false
PFTrDA_1	663.0 / 619.0	4.30	3111653.18	10548.173082	1010.2	false
PFTrDA_2	663.0 / 169.0	4.30	196901.54	10520.412689	738.1	false
PFTeDA_1	713.0 / 669.0	4.52	3467580.23	10503.581439	2069.7	false
PFTeDA_2	713.0 / 169.0	4.51	162175.94	10648.951861	1753.8	false
NMeFOSAA_1	570.0 / 419.0	3.60	555467.81	9567.618995	1280.2	true
NMeFOSAA_2	570.0 / 512.0	3.60	318990.40	10139.510763	1015.6	false
NEtFOSAA_1	584.0 / 419.0	3.76	533532.19	9444.163786	978.5	false
NEtFOSAA_2	584.0 / 483.0	3.76	32707.74	10131.354561	526.2	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	2018-10-14T13:30:11	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	6502862.66	19846.703354	2639.9	false
PFBS_2	298.9 / 99.0	1.55	1904225.52	19676.910112	1806.9	false
PFHxA_1	313.0 / 269.0	1.87	4396686.08	20217.508690	170.7	false
PFHxA_2	313.0 / 119.0	1.86	322269.94	20283.962299	131.1	false
PFHpA_1	363.0 / 319.0	2.27	4125009.19	19870.143448	430.0	false
PFHpA_2	363.0 / 169.0	2.27	79139.46	19340.834609	336.4	false
PFHxS_1	399.0 / 80.0	2.30	6165219.94	20068.622953	955.1	false
PFHxS_2	399.0 / 99.0	2.30	1776444.95	20254.202745	1044.5	false
PFOA_1	413.0 / 369.0	2.68	5551271.60	20326.165390	1008.7	false
PFOA_2	413.0 / 169.0	2.68	327871.67	20157.342605	855.4	false
PFNA_1	463.0 / 419.0	3.08	5273827.62	19536.799214	1308.5	false
PFNA_2	463.0 / 219.0	3.08	1623154.16	19640.776454	1219.0	false
PFOS_1	499.0 / 80.0	3.08	9211348.93	19496.219465	546.9	false
PFOS_2	499.0 / 99.0	3.08	1601531.17	19229.778835	724.2	false
PFDA_1	513.0 / 469.0	3.44	6156207.59	20443.644282	860.4	false
PFDA_2	513.0 / 219.0	3.44	244506.58	20408.666086	624.7	false
PFUnA_1	563.0 / 519.0	3.76	6031506.10	20313.162915	730.9	false
PFUnA_2	563.0 / 269.0	3.76	281789.39	20279.424201	546.1	false
PFDoA_1	613.0 / 569.0	4.05	5814143.64	19378.088488	761.2	false
PFDoA_2	613.0 / 319.0	4.05	891108.60	19184.287007	746.0	false
PFTrDA_1	663.0 / 619.0	4.30	5430141.50	19301.543504	1274.8	false
PFTrDA_2	663.0 / 169.0	4.30	343511.10	19258.350443	832.7	false
PFTeDA_1	713.0 / 669.0	4.52	6079763.98	19311.162956	2228.4	false
PFTeDA_2	713.0 / 169.0	4.51	278117.27	19165.736237	1542.2	false
NMeFOSAA_1	570.0 / 419.0	3.59	969212.88	19092.468812	1388.0	true
NMeFOSAA_2	570.0 / 512.0	3.59	537798.36	19632.537155	1305.5	false
NEtFOSAA_1	584.0 / 419.0	3.76	894319.51	20856.698006	993.6	false
NEtFOSAA_2	584.0 / 483.0	3.76	53931.19	22119.823543	748.5	false

BATTELLE

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	2018-10-14T12:25:01	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	85911.23	258.078699	589.0	false
d3-MeFOSAA	573.0 / 419.0	3.59	12726.65	250.221707	174.0	false
d5-EtFOSAA	589.0 / 419.0	3.75	13685.13	262.671199	188.6	false
13C5-PFHxA	318.0 / 273.0	1.85	58992.05	243.049455	734.9	false
13C4-PFHpA	367.0 / 322.0	2.26	68993.21	252.883573	875.4	false
13C8-PFOA	421.0 / 376.0	2.67	83707.61	251.823599	3920.2	false
13C9-PFNA	472.0 / 427.0	3.07	77004.14	231.215140	706.9	false
13C6-PFDA	519.0 / 474.0	3.43	86235.95	259.534461	912.8	false
13C7-PFUnA	570.0 / 525.0	3.75	74552.54	244.672187	690.3	false
13C2-PFTeDA	715.0 / 670.0	4.52	65334.68	245.534303	1392.0	false
13C3-PFBS	302.0 / 99.0	1.53	25507.06	231.116682	381.8	false
13C3-PFHxS	402.0 / 99.0	2.28	25598.79	256.001632	273.3	false
13C8-PFOS	507.0 / 99.0	3.07	25133.03	239.624764	245.0	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	2018-10-14T12:35:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	87955.17	258.307131	850.9	false
d3-MeFOSAA	573.0 / 419.0	3.59	12674.29	205.301118	155.7	false
d5-EtFOSAA	589.0 / 419.0	3.75	15006.90	237.307222	159.1	false
13C5-PFHxA	318.0 / 273.0	1.85	64192.67	256.364104	744.0	false
13C4-PFHpA	367.0 / 322.0	2.26	69145.47	245.667987	824.1	false
13C8-PFOA	421.0 / 376.0	2.67	86802.22	253.123736	10954.0	false
13C9-PFNA	472.0 / 427.0	3.07	86008.04	250.329357	225862.6	false
13C6-PFDA	519.0 / 474.0	3.43	86272.70	253.835780	1444.8	false
13C7-PFUnA	570.0 / 525.0	3.75	87493.78	280.719213	996.9	false
13C2-PFTeDA	715.0 / 670.0	4.51	69129.79	253.984041	1739.1	false
13C3-PFBS	302.0 / 99.0	1.53	26620.23	198.718979	524.6	false
13C3-PFHxS	402.0 / 99.0	2.28	28943.98	238.472453	319.9	false
13C8-PFOS	507.0 / 99.0	3.07	29474.77	231.522846	244.5	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	2018-10-14T12:46:44	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	75924.03	221.653879	713.9	false
d3-MeFOSAA	573.0 / 419.0	3.59	10266.64	198.766210	163.0	false
d5-EtFOSAA	589.0 / 419.0	3.75	14339.78	271.025032	219.8	false
13C5-PFHxA	318.0 / 273.0	1.86	54588.76	232.024639	685.5	false
13C4-PFHpA	367.0 / 322.0	2.27	67914.41	256.806395	479.4	false
13C8-PFOA	421.0 / 376.0	2.68	85054.35	263.971874	1544.9	false
13C9-PFNA	472.0 / 427.0	3.07	79144.96	245.163086	1111.5	false
13C6-PFDA	519.0 / 474.0	3.43	82680.23	241.825547	773.1	false
13C7-PFUnA	570.0 / 525.0	3.75	77659.10	247.689949	704.1	false
13C2-PFTeDA	715.0 / 670.0	4.51	64141.97	234.263449	1294.0	false
13C3-PFBS	302.0 / 99.0	1.53	22770.68	203.165718	391.5	false
13C3-PFHxS	402.0 / 99.0	2.29	23096.50	227.443232	279.6	false
13C8-PFOS	507.0 / 99.0	3.07	25018.51	234.883127	202.7	false

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Summary Quant Report

Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:57:36	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	88837.02	240.469815	917.4	false
d3-MeFOSAA	573.0 / 419.0	3.59	12872.58	241.154226	164.7	false
d5-EtFOSAA	589.0 / 419.0	3.76	14023.71	256.474822	201.1	false
13C5-PFHxA	318.0 / 273.0	1.85	64645.10	263.859828	612.8	false
13C4-PFHpA	367.0 / 322.0	2.27	71039.67	257.959593	602.6	false
13C8-PFOA	421.0 / 376.0	2.68	85417.17	254.573472	7949.1	false
13C9-PFNA	472.0 / 427.0	3.07	83855.35	249.441918	927.2	false
13C6-PFDA	519.0 / 474.0	3.43	93417.19	253.336528	951.4	false
13C7-PFUnA	570.0 / 525.0	3.75	79269.80	234.419788	617.3	false
13C2-PFTeDA	715.0 / 670.0	4.51	72717.46	246.247279	1265.5	false
13C3-PFBS	302.0 / 99.0	1.53	27220.85	235.012505	396.1	false
13C3-PFHxS	402.0 / 99.0	2.29	25507.54	243.058192	320.1	false
13C8-PFOS	507.0 / 99.0	3.07	27152.73	246.671377	250.8	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	2018-10-14T13:08:28	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	85190.84	245.586916	723.8	false
d3-MeFOSAA	573.0 / 419.0	3.59	12995.98	230.650075	137.7	false
d5-EtFOSAA	589.0 / 419.0	3.75	14377.68	249.106946	225.0	false
13C5-PFHxA	318.0 / 273.0	1.85	55982.86	232.257516	668.3	false
13C4-PFHpA	367.0 / 322.0	2.26	62944.79	232.320508	548.0	false
13C8-PFOA	421.0 / 376.0	2.67	82477.09	249.849396	4810.0	false
13C9-PFNA	472.0 / 427.0	3.07	78399.76	237.044809	814.1	false
13C6-PFDA	519.0 / 474.0	3.42	89372.90	258.120569	829.4	false
13C7-PFUnA	570.0 / 525.0	3.75	78235.90	246.398664	718.5	false
13C2-PFTeDA	715.0 / 670.0	4.51	65885.03	237.610301	1486.5	false
13C3-PFBS	302.0 / 99.0	1.53	26641.68	217.904512	379.1	false
13C3-PFHxS	402.0 / 99.0	2.28	22857.01	206.336677	321.4	false
13C8-PFOS	507.0 / 99.0	3.06	27089.57	233.143125	229.9	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	2018-10-14T13:19:19	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	92551.66	245.967877	829.8	false
d3-MeFOSAA	573.0 / 419.0	3.59	16336.51	303.640786	120.2	false
d5-EtFOSAA	589.0 / 419.0	3.75	13671.67	248.070447	130.2	false
13C5-PFHxA	318.0 / 273.0	1.85	63012.56	266.379146	741.9	false
13C4-PFHpA	367.0 / 322.0	2.27	68152.10	256.309897	722.4	false
13C8-PFOA	421.0 / 376.0	2.68	81941.47	252.933954	4399.2	false
13C9-PFNA	472.0 / 427.0	3.07	88781.02	273.523216	1029.7	false
13C6-PFDA	519.0 / 474.0	3.43	91272.35	243.017669	1523.9	false
13C7-PFUnA	570.0 / 525.0	3.75	85125.55	247.157644	912.0	false
13C2-PFTeDA	715.0 / 670.0	4.51	73328.14	243.798491	1504.8	false
13C3-PFBS	302.0 / 99.0	1.53	29219.74	250.286360	441.1	false
13C3-PFHxS	402.0 / 99.0	2.29	25399.89	240.129280	291.1	false
13C8-PFOS	507.0 / 99.0	3.07	25647.86	231.168064	244.2	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	2018-10-14T13:30:11	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	84995.48	279.935683	935.4	false
d3-MeFOSAA	573.0 / 419.0	3.58	14155.70	320.265877	110.9	false
d5-EtFOSAA	589.0 / 419.0	3.75	10202.70	225.344333	114.1	false
13C5-PFHxA	318.0 / 273.0	1.85	54884.46	256.065312	654.0	false
13C4-PFHpA	367.0 / 322.0	2.26	59762.45	248.052047	580.7	false
13C8-PFOA	421.0 / 376.0	2.67	65672.10	223.723969	3546.8	false
13C9-PFNA	472.0 / 427.0	3.07	77431.85	263.282474	884.6	false
13C6-PFDA	519.0 / 474.0	3.42	72835.00	240.329447	642.2	false
13C7-PFUnA	570.0 / 525.0	3.75	69185.77	248.942556	667.1	false
13C2-PFTeDA	715.0 / 670.0	4.51	70034.29	288.562136	1391.4	false
13C3-PFBS	302.0 / 99.0	1.53	27770.08	289.545243	431.9	false
13C3-PFHxS	402.0 / 99.0	2.29	21208.13	244.058536	273.2	false
13C8-PFOS	507.0 / 99.0	3.07	23492.06	257.736698	220.0	false

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Summary Ion Ratio Report

Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:25:01	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.330	0.302	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.060	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.300	0.285	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.090	0.058	ü
PFNA_1	463.0 / 419.0	3.09	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	0.200	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.45	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	3.77	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.29	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.52	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.60	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	0.380	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.100	0.074	ü

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Summary Ion Ratio Report

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Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:35:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.080	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.300	0.285	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.050	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.290	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.190	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.050	0.041	ü
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.060	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.30	PFTrDA	0.080	0.066	ü
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.52	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	0.660	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.070	0.074	ü

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Summary Ion Ratio Report

Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:46:44	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.270	0.285	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.330	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.200	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	3.77	PFUnA	0.060	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.30	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.52	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.60	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	0.580	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.090	0.074	ü

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Summary Ion Ratio Report

Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:57:36	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.28	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.09	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.280	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.45	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	3.77	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.30	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.51	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.51	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.60	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	0.530	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.070	0.074	ü

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Summary Ion Ratio Report

Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:08:28	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.28	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.30	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.52	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.550	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.060	0.074	ü

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Summary Ion Ratio Report

Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:19:19	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.87	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.300	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.77	PFUnA			
PFUnA_2	563.0 / 269.0	3.77	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.30	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.51	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.60	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	0.570	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.060	0.074	ü

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Summary Ion Ratio Report

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Printed: 17/10/2018 11:34:44 AM

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:30:11	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.290	0.302	ü
PFHxA_1	313.0 / 269.0	1.87	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.170	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.150	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.30	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.51	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.550	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.76	NEtFOSAA	0.060	0.074	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	2018-10-14T12:25:01	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	25507.06	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	25507.06	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	58992.05	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	58992.05	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	68993.21	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	68993.21	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	25123.12	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25123.12	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	83707.61	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	83707.61	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	77004.14	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	77004.14	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	25159.77	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	25159.77	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	86235.95	250.00
PFDA_2	513.0 / 219.0	3.45	13C6-PFDA	519.0 / 474.0	86235.95	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	74552.54	250.00
PFUnA_2	563.0 / 269.0	3.77	13C7-PFUnA	570.0 / 525.0	74552.54	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	85911.23	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	85911.23	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	65334.68	250.00
PFTrDA_2	663.0 / 169.0	4.29	13C2-PFTeDA	715.0 / 670.0	65334.68	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	65334.68	250.00
PFTeDA_2	713.0 / 169.0	4.52	13C2-PFTeDA	715.0 / 670.0	65334.68	250.00
NMeFOSAA_1	570.0 / 419.0	3.60	d3-MeFOSAA	573.0 / 419.0	11949.32	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	11949.32	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	14175.60	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	14175.60	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	2018-10-14T12:35:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	26620.23	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	26620.23	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	64192.67	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	64192.67	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	69145.47	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	69145.47	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	28665.19	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	28665.19	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	86802.22	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	86802.22	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	86008.04	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	86008.04	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	29815.50	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	29815.50	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	86272.70	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	86272.70	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	87493.78	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	87493.78	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	87955.17	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	87955.17	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	69129.79	250.00
PFTrDA_2	663.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	69129.79	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	69129.79	250.00
PFTeDA_2	713.0 / 169.0	4.52	13C2-PFTeDA	715.0 / 670.0	69129.79	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	12110.49	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	12110.49	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	15502.77	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	15502.77	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	2018-10-14T12:46:44	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	22770.68	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	22770.68	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	54588.76	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	54588.76	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	67914.41	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	67914.41	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	22563.92	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	22563.92	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	85054.35	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	85054.35	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	79144.96	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	79144.96	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	25059.03	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	25059.03	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	82680.23	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	82680.23	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	77659.10	250.00
PFUnA_2	563.0 / 269.0	3.77	13C7-PFUnA	570.0 / 525.0	77659.10	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	75924.03	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	75924.03	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	64141.97	250.00
PFTrDA_2	663.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	64141.97	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	64141.97	250.00
PFTeDA_2	713.0 / 169.0	4.52	13C2-PFTeDA	715.0 / 670.0	64141.97	250.00
NMeFOSAA_1	570.0 / 419.0	3.60	d3-MeFOSAA	573.0 / 419.0	9963.29	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	9963.29	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	14707.85	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	14707.85	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	2018-10-14T12:57:36	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	27220.85	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	27220.85	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	64645.10	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	64645.10	250.00
PFHpA_1	363.0 / 319.0	2.28	13C4-PFHpA	367.0 / 322.0	71039.67	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	71039.67	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	25138.95	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25138.95	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	85417.17	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	85417.17	250.00
PFNA_1	463.0 / 419.0	3.09	13C9-PFNA	472.0 / 427.0	83855.35	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	83855.35	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	27718.53	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	27718.53	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	93417.19	250.00
PFDA_2	513.0 / 219.0	3.45	13C6-PFDA	519.0 / 474.0	93417.19	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	79269.80	250.00
PFUnA_2	563.0 / 269.0	3.77	13C7-PFUnA	570.0 / 525.0	79269.80	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	88837.02	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	88837.02	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	72717.46	250.00
PFTrDA_2	663.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	72717.46	250.00
PFTeDA_1	713.0 / 669.0	4.51	13C2-PFTeDA	715.0 / 670.0	72717.46	250.00
PFTeDA_2	713.0 / 169.0	4.51	13C2-PFTeDA	715.0 / 670.0	72717.46	250.00
NMeFOSAA_1	570.0 / 419.0	3.60	d3-MeFOSAA	573.0 / 419.0	11764.01	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	11764.01	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	14293.39	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	14293.39	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	2018-10-14T13:08:28	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	26641.68	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	26641.68	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	55982.86	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	55982.86	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	62944.79	250.00
PFHpA_2	363.0 / 169.0	2.28	13C4-PFHpA	367.0 / 322.0	62944.79	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	22441.34	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	22441.34	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	82477.09	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	82477.09	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	78399.76	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	78399.76	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	27200.51	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	27200.51	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	89372.90	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	89372.90	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	78235.90	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	78235.90	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	85190.84	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	85190.84	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	65885.03	250.00
PFTrDA_2	663.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	65885.03	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	65885.03	250.00
PFTeDA_2	713.0 / 169.0	4.52	13C2-PFTeDA	715.0 / 670.0	65885.03	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	12798.77	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	12798.77	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	14703.02	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	14703.02	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	2018-10-14T13:19:19	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	29219.74	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	29219.74	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	63012.56	250.00
PFHxA_2	313.0 / 119.0	1.87	13C5-PFHxA	318.0 / 273.0	63012.56	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	68152.10	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	68152.10	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	25302.81	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	25302.81	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	81941.47	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	81941.47	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	88781.02	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	88781.02	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	26078.29	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	26078.29	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	91272.35	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	91272.35	250.00
PFUnA_1	563.0 / 519.0	3.77	13C7-PFUnA	570.0 / 525.0	85125.55	250.00
PFUnA_2	563.0 / 269.0	3.77	13C7-PFUnA	570.0 / 525.0	85125.55	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	92551.66	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	92551.66	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	73328.14	250.00
PFTrDA_2	663.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	73328.14	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	73328.14	250.00
PFTeDA_2	713.0 / 169.0	4.51	13C2-PFTeDA	715.0 / 670.0	73328.14	250.00
NMeFOSAA_1	570.0 / 419.0	3.60	d3-MeFOSAA	573.0 / 419.0	15828.08	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	15828.08	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	13944.25	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	13944.25	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	2018-10-14T13:30:11	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	27770.08	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	27770.08	232.25
PFHxA_1	313.0 / 269.0	1.87	13C5-PFHxA	318.0 / 273.0	54884.46	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	54884.46	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	59762.45	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	59762.45	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	21237.44	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	21237.44	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	65672.10	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	65672.10	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	77431.85	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	77431.85	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	24167.05	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	24167.05	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	72835.00	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	72835.00	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	69185.77	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	69185.77	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	84995.48	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	84995.48	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	70034.29	250.00
PFTrDA_2	663.0 / 169.0	4.30	13C2-PFTeDA	715.0 / 670.0	70034.29	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	70034.29	250.00
PFTeDA_2	713.0 / 169.0	4.51	13C2-PFTeDA	715.0 / 670.0	70034.29	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	13907.55	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	13907.55	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	10565.00	250.00
NEtFOSAA_2	584.0 / 483.0	3.76	d5-EtFOSAA	589.0 / 419.0	10565.00	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	2018-10-14T12:25:01	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	86188.94	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	26230.38	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	26230.38	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	77765.59	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	77765.59	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	77765.59	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	77765.59	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	86188.94	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	86188.94	250.00
13C2-PFTeDA	715.0 / 670.0	4.52	13C2-PFDA	515.0 / 470.0	86188.94	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	26230.38	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	26230.38	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	26230.38	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	2018-10-14T12:35:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	88161.46	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	31838.16	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	31838.16	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	80226.33	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	80226.33	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	80226.33	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	80226.33	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	88161.46	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	88161.46	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	88161.46	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	31838.16	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	31838.16	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	31838.16	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	2018-10-14T12:46:44	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	88686.54	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	26637.97	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	26637.97	239.25
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	75380.30	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	75380.30	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	75380.30	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	75380.30	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	88686.54	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	88686.54	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	88686.54	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	26637.97	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	26637.97	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	26637.97	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	2018-10-14T12:57:36	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	95650.49	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	27528.74	239.25
d5-EtFOSAA	589.0 / 419.0	3.76	13C4-PFOS	503.0 / 99.0	27528.74	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	78496.63	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	78496.63	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	78496.63	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	78496.63	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	95650.49	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	95650.49	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	95650.49	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	27528.74	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	27528.74	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	27528.74	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	2018-10-14T13:08:28	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	89813.46	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	29058.35	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	29058.35	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	77227.86	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	77227.86	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	77227.86	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	77227.86	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	89813.46	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	89813.46	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	89813.46	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	29058.35	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	29058.35	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	29058.35	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	2018-10-14T13:19:19	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	97422.57	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	27746.91	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	27746.91	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	75790.65	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	75790.65	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	75790.65	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	75790.65	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	97422.57	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	97422.57	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	97422.57	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	27746.91	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	27746.91	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	27746.91	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	2018-10-14T13:30:11	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	78612.45	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	22794.83	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	22794.83	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	68673.21	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	68673.21	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	68673.21	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	68673.21	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	78612.45	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	78612.45	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	78612.45	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	22794.83	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	22794.83	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	22794.83	239.25

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QC Summary 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	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	925.435980	1010.00	91.63
PFBS_2	298.9 / 99.0	1.54	950.236372	1010.00	94.08
PFHxA_1	313.0 / 269.0	1.86	879.267704	1010.00	87.06
PFHxA_2	313.0 / 119.0	1.86	949.504440	1010.00	94.01
PFHpA_1	363.0 / 319.0	2.27	964.602765	1000.00	96.46
PFHpA_2	363.0 / 169.0	2.27	1223.585962	1000.00	122.36
PFHxS_1	399.0 / 80.0	2.30	889.617656	1010.00	88.08
PFHxS_2	399.0 / 99.0	2.29	858.021180	1010.00	84.95
PFOA_1	413.0 / 369.0	2.68	865.140938	1000.00	86.51
PFOA_2	413.0 / 169.0	2.68	875.419686	1000.00	87.54
PFNA_1	463.0 / 419.0	3.08	952.628861	1000.00	95.26
PFNA_2	463.0 / 219.0	3.08	965.063864	1000.00	96.51
PFOS_1	499.0 / 80.0	3.08	1025.902305	1000.00	102.59
PFOS_2	499.0 / 99.0	3.08	1013.860679	1000.00	101.39
PFDA_1	513.0 / 469.0	3.44	932.797929	1000.00	93.28
PFDA_2	513.0 / 219.0	3.44	834.143591	1000.00	83.41
PFUnA_1	563.0 / 519.0	3.76	958.510248	1000.00	95.85
PFUnA_2	563.0 / 269.0	3.76	951.670001	1000.00	95.17
PFDoA_1	613.0 / 569.0	4.05	895.168832	1000.00	89.52
PFDoA_2	613.0 / 319.0	4.05	887.918400	1000.00	88.79
PFTrDA_1	663.0 / 619.0	4.30	997.200651	1000.00	99.72
PFTrDA_2	663.0 / 169.0	4.29	956.042222	1000.00	95.60
PFTeDA_1	713.0 / 669.0	4.51	986.644713	1000.00	98.66
PFTeDA_2	713.0 / 169.0	4.51	966.965594	1000.00	96.70
NMeFOSAA_1	570.0 / 419.0	3.59	947.445233	1000.00	94.74
NMeFOSAA_2	570.0 / 512.0	3.59	844.344682	1000.00	84.43
NEtFOSAA_1	584.0 / 419.0	3.75	1009.319182	1000.00	100.93
NEtFOSAA_2	584.0 / 483.0	3.75	860.050415	1000.00	86.01

Sample Name	KB76 CCV	**Injection Vial**	35
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	995.403138	1010.00	98.55
PFBS_2	298.9 / 99.0	1.53	1005.439060	1010.00	99.55
PFHxA_1	313.0 / 269.0	1.85	980.223033	1010.00	97.05
PFHxA_2	313.0 / 119.0	1.85	929.802998	1010.00	92.06
PFHpA_1	363.0 / 319.0	2.26	941.032703	1000.00	94.10
PFHpA_2	363.0 / 169.0	2.26	1056.767175	1000.00	105.68
PFHxS_1	399.0 / 80.0	2.28	916.111865	1010.00	90.70
PFHxS_2	399.0 / 99.0	2.28	973.744003	1010.00	96.41
PFOA_1	413.0 / 369.0	2.67	1014.378129	1000.00	101.44
PFOA_2	413.0 / 169.0	2.67	1042.740849	1000.00	104.27
PFNA_1	463.0 / 419.0	3.07	1019.976190	1000.00	102.00
PFNA_2	463.0 / 219.0	3.07	1031.215341	1000.00	103.12
PFOS_1	499.0 / 80.0	3.07	1117.914554	1000.00	111.79
PFOS_2	499.0 / 99.0	3.06	1107.366129	1000.00	110.74
PFDA_1	513.0 / 469.0	3.42	1045.406017	1000.00	104.54
PFDA_2	513.0 / 219.0	3.42	975.040409	1000.00	97.50
PFUnA_1	563.0 / 519.0	3.75	963.878456	1000.00	96.39
PFUnA_2	563.0 / 269.0	3.75	867.555530	1000.00	86.76
PFDoA_1	613.0 / 569.0	4.03	1034.445696	1000.00	103.44
PFDoA_2	613.0 / 319.0	4.03	969.334929	1000.00	96.93
PFTrDA_1	663.0 / 619.0	4.28	1091.320783	1000.00	109.13
PFTrDA_2	663.0 / 169.0	4.28	1130.627354	1000.00	113.06
PFTeDA_1	713.0 / 669.0	4.49	1089.440040	1000.00	108.94
PFTeDA_2	713.0 / 169.0	4.49	1066.567209	1000.00	106.66
NMeFOSAA_1	570.0 / 419.0	3.58	1093.178594	1000.00	109.32
NMeFOSAA_2	570.0 / 512.0	3.58	981.123905	1000.00	98.11
NEtFOSAA_1	584.0 / 419.0	3.74	936.532073	1000.00	93.65
NEtFOSAA_2	584.0 / 483.0	3.74	859.070188	1000.00	85.91

Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2417.927187	2525.00	95.76
PFBS_2	298.9 / 99.0	1.54	2413.818920	2525.00	95.60
PFHxA_1	313.0 / 269.0	1.85	2397.476772	2525.00	94.95
PFHxA_2	313.0 / 119.0	1.85	2510.385090	2525.00	99.42
PFHpA_1	363.0 / 319.0	2.26	2296.516788	2500.00	91.86
PFHpA_2	363.0 / 169.0	2.26	2529.036877	2500.00	101.16
PFHxS_1	399.0 / 80.0	2.28	2387.486641	2525.00	94.55
PFHxS_2	399.0 / 99.0	2.28	2358.927270	2525.00	93.42
PFOA_1	413.0 / 369.0	2.67	2582.383428	2500.00	103.30
PFOA_2	413.0 / 169.0	2.67	2698.539862	2500.00	107.94
PFNA_1	463.0 / 419.0	3.06	2381.641825	2500.00	95.27
PFNA_2	463.0 / 219.0	3.06	2487.176627	2500.00	99.49
PFOS_1	499.0 / 80.0	3.06	2629.609497	2500.00	105.18
PFOS_2	499.0 / 99.0	3.06	2599.783288	2500.00	103.99
PFDA_1	513.0 / 469.0	3.42	2284.157206	2500.00	91.37
PFDA_2	513.0 / 219.0	3.42	2480.951182	2500.00	99.24
PFUnA_1	563.0 / 519.0	3.74	2186.390863	2500.00	87.46
PFUnA_2	563.0 / 269.0	3.74	1981.302206	2500.00	79.25
PFDoA_1	613.0 / 569.0	4.03	2498.152817	2500.00	99.93
PFDoA_2	613.0 / 319.0	4.03	2653.152293	2500.00	106.13
PFTrDA_1	663.0 / 619.0	4.28	2608.719122	2500.00	104.35
PFTrDA_2	663.0 / 169.0	4.27	2632.808265	2500.00	105.31
PFTeDA_1	713.0 / 669.0	4.49	2587.933192	2500.00	103.52
PFTeDA_2	713.0 / 169.0	4.49	2607.493569	2500.00	104.30
NMeFOSAA_1	570.0 / 419.0	3.58	2740.558025	2500.00	109.62
NMeFOSAA_2	570.0 / 512.0	3.58	2478.293299	2500.00	99.13
NEtFOSAA_1	584.0 / 419.0	3.74	2277.228754	2500.00	91.09
NEtFOSAA_2	584.0 / 483.0	3.73	2479.207911	2500.00	99.17

Sample Name	KB76 CCV	**Injection Vial**	3
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.53	981.784864	1010.00	97.21
PFBS_2	298.9 / 99.0	1.53	965.928846	1010.00	95.64
PFHxA_1	313.0 / 269.0	1.85	1013.362497	1010.00	100.33
PFHxA_2	313.0 / 119.0	1.85	965.749847	1010.00	95.62
PFHpA_1	363.0 / 319.0	2.26	977.210844	1000.00	97.72
PFHpA_2	363.0 / 169.0	2.25	934.712384	1000.00	93.47
PFHxS_1	399.0 / 80.0	2.28	861.585974	1010.00	85.31
PFHxS_2	399.0 / 99.0	2.28	871.741228	1010.00	86.31
PFOA_1	413.0 / 369.0	2.66	994.638104	1000.00	99.46
PFOA_2	413.0 / 169.0	2.66	1004.398683	1000.00	100.44
PFNA_1	463.0 / 419.0	3.06	1059.488054	1000.00	105.95
PFNA_2	463.0 / 219.0	3.06	1045.239334	1000.00	104.52
PFOS_1	499.0 / 80.0	3.06	1023.767479	1000.00	102.38
PFOS_2	499.0 / 99.0	3.06	1045.000306	1000.00	104.50
PFDA_1	513.0 / 469.0	3.41	935.964407	1000.00	93.60
PFDA_2	513.0 / 219.0	3.41	963.836495	1000.00	96.38
PFUnA_1	563.0 / 519.0	3.73	1037.752841	1000.00	103.78
PFUnA_2	563.0 / 269.0	3.73	1153.465005	1000.00	115.35
PFDoA_1	613.0 / 569.0	4.02	1041.741900	1000.00	104.17
PFDoA_2	613.0 / 319.0	4.02	998.651285	1000.00	99.87
PFTrDA_1	663.0 / 619.0	4.26	1034.305724	1000.00	103.43
PFTrDA_2	663.0 / 169.0	4.26	1058.138207	1000.00	105.81
PFTeDA_1	713.0 / 669.0	4.48	965.854728	1000.00	96.59
PFTeDA_2	713.0 / 169.0	4.48	947.837270	1000.00	94.78
NMeFOSAA_1	570.0 / 419.0	3.57	1005.381761	1000.00	100.54
NMeFOSAA_2	570.0 / 512.0	3.57	909.487107	1000.00	90.95
NEtFOSAA_1	584.0 / 419.0	3.73	1100.808427	1000.00	110.08
NEtFOSAA_2	584.0 / 483.0	3.72	1286.611789	1000.00	128.66

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QC Summary Report

Sample Name	KB77 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
PFBS_1	298.9 / 80.0	1.53	2618.538405	2525.00	103.70
PFBS_2	298.9 / 99.0	1.53	2523.454240	2525.00	99.94
PFHxA_1	313.0 / 269.0	1.85	2414.953985	2525.00	95.64
PFHxA_2	313.0 / 119.0	1.85	2631.721050	2525.00	104.23
PFHpA_1	363.0 / 319.0	2.26	2407.707049	2500.00	96.31
PFHpA_2	363.0 / 169.0	2.25	2665.898057	2500.00	106.64
PFHxS_1	399.0 / 80.0	2.28	2478.608784	2525.00	98.16
PFHxS_2	399.0 / 99.0	2.28	2448.753553	2525.00	96.98
PFOA_1	413.0 / 369.0	2.67	2430.684244	2500.00	97.23
PFOA_2	413.0 / 169.0	2.67	2282.079114	2500.00	91.28
PFNA_1	463.0 / 419.0	3.06	2579.529090	2500.00	103.18
PFNA_2	463.0 / 219.0	3.06	2612.371058	2500.00	104.49
PFOS_1	499.0 / 80.0	3.06	2722.127690	2500.00	108.89
PFOS_2	499.0 / 99.0	3.06	2729.536249	2500.00	109.18
PFDA_1	513.0 / 469.0	3.42	2534.222686	2500.00	101.37
PFDA_2	513.0 / 219.0	3.42	2901.723207	2500.00	116.07
PFUnA_1	563.0 / 519.0	3.74	2497.834896	2500.00	99.91
PFUnA_2	563.0 / 269.0	3.74	2381.658019	2500.00	95.27
PFDoA_1	613.0 / 569.0	4.02	2544.545066	2500.00	101.78
PFDoA_2	613.0 / 319.0	4.02	2539.047004	2500.00	101.56
PFTrDA_1	663.0 / 619.0	4.27	2551.708640	2500.00	102.07
PFTrDA_2	663.0 / 169.0	4.27	2596.429572	2500.00	103.86
PFTeDA_1	713.0 / 669.0	4.49	2460.343220	2500.00	98.41
PFTeDA_2	713.0 / 169.0	4.48	2407.060266	2500.00	96.28
NMeFOSAA_1	570.0 / 419.0	3.57	2790.523735	2500.00	111.62
NMeFOSAA_2	570.0 / 512.0	3.57	2886.592458	2500.00	115.46
NEtFOSAA_1	584.0 / 419.0	3.73	2397.243044	2500.00	95.89
NEtFOSAA_2	584.0 / 483.0	3.73	2687.008450	2500.00	107.48

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QC Summary 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	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.04	276.754344	250.00	110.70
d3-MeFOSAA	573.0 / 419.0	3.59	256.502272	250.00	102.60
d5-EtFOSAA	589.0 / 419.0	3.75	205.964344	250.00	82.39
13C5-PFHxA	318.0 / 273.0	1.85	232.644972	250.00	93.06
13C4-PFHpA	367.0 / 322.0	2.26	216.588781	250.00	86.64
13C8-PFOA	421.0 / 376.0	2.67	243.586025	250.00	97.43
13C9-PFNA	472.0 / 427.0	3.06	251.131162	250.00	100.45
13C6-PFDA	519.0 / 474.0	3.42	262.700560	250.00	105.08
13C7-PFUnA	570.0 / 525.0	3.74	255.397242	250.00	102.16
13C2-PFTeDA	715.0 / 670.0	4.51	255.314914	250.00	102.13
13C3-PFBS	302.0 / 99.0	1.53	212.938723	232.25	91.69
13C3-PFHxS	402.0 / 99.0	2.28	238.736615	236.50	100.95
13C8-PFOS	507.0 / 99.0	3.06	201.629894	239.25	84.28

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QC Summary Report

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Sample Name	KB76 CCV	**Injection Vial**	35
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	250.564842	250.00	100.23
d3-MeFOSAA	573.0 / 419.0	3.57	216.858160	250.00	86.74
d5-EtFOSAA	589.0 / 419.0	3.73	263.383521	250.00	105.35
13C5-PFHxA	318.0 / 273.0	1.84	233.492537	250.00	93.40
13C4-PFHpA	367.0 / 322.0	2.25	235.952116	250.00	94.38
13C8-PFOA	421.0 / 376.0	2.66	236.655051	250.00	94.66
13C9-PFNA	472.0 / 427.0	3.05	241.218926	250.00	96.49
13C6-PFDA	519.0 / 474.0	3.41	248.784377	250.00	99.51
13C7-PFUnA	570.0 / 525.0	3.73	286.975660	250.00	114.79
13C2-PFTeDA	715.0 / 670.0	4.49	241.985895	250.00	96.79
13C3-PFBS	302.0 / 99.0	1.52	214.876792	232.25	92.52
13C3-PFHxS	402.0 / 99.0	2.27	244.382356	236.50	103.33
13C8-PFOS	507.0 / 99.0	3.05	198.840027	239.25	83.11

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QC Summary Report

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Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	246.274792	250.00	98.51
d3-MeFOSAA	573.0 / 419.0	3.57	231.135732	250.00	92.45
d5-EtFOSAA	589.0 / 419.0	3.73	246.128938	250.00	98.45
13C5-PFHxA	318.0 / 273.0	1.84	235.916274	250.00	94.37
13C4-PFHpA	367.0 / 322.0	2.25	232.731848	250.00	93.09
13C8-PFOA	421.0 / 376.0	2.66	221.697298	250.00	88.68
13C9-PFNA	472.0 / 427.0	3.05	247.664963	250.00	99.07
13C6-PFDA	519.0 / 474.0	3.41	256.521668	250.00	102.61
13C7-PFUnA	570.0 / 525.0	3.73	276.961400	250.00	110.78
13C2-PFTeDA	715.0 / 670.0	4.49	235.211039	250.00	94.08
13C3-PFBS	302.0 / 99.0	1.52	223.077260	232.25	96.05
13C3-PFHxS	402.0 / 99.0	2.27	221.079210	236.50	93.48
13C8-PFOS	507.0 / 99.0	3.05	202.520512	239.25	84.65

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QC Summary Report

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Printed: 22/10/2018 1:16:24 PM

Sample Name	KB76 CCV	**Injection Vial**	3
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	260.119992	250.00	104.05
d3-MeFOSAA	573.0 / 419.0	3.56	295.899542	250.00	118.36
d5-EtFOSAA	589.0 / 419.0	3.72	291.180290	250.00	116.47
13C5-PFHxA	318.0 / 273.0	1.84	227.368473	250.00	90.95
13C4-PFHpA	367.0 / 322.0	2.25	226.735659	250.00	90.69
13C8-PFOA	421.0 / 376.0	2.65	230.724888	250.00	92.29
13C9-PFNA	472.0 / 427.0	3.04	230.477841	250.00	92.19
13C6-PFDA	519.0 / 474.0	3.40	272.579252	250.00	109.03
13C7-PFUnA	570.0 / 525.0	3.72	278.852372	250.00	111.54
13C2-PFTeDA	715.0 / 670.0	4.47	256.726807	250.00	102.69
13C3-PFBS	302.0 / 99.0	1.52	283.276402	232.25	121.97
13C3-PFHxS	402.0 / 99.0	2.27	307.023355	236.50	129.82
13C8-PFOS	507.0 / 99.0	3.04	277.747449	239.25	116.09

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QC Summary Report

Created with Analyst Reporter
Printed: 22/10/2018 11:40:55 AM

Sample Name	KB77 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	234.499515	250.00	93.80
d3-MeFOSAA	573.0 / 419.0	3.57	209.000085	250.00	83.60
d5-EtFOSAA	589.0 / 419.0	3.72	230.020313	250.00	92.01
13C5-PFHxA	318.0 / 273.0	1.84	243.999606	250.00	97.60
13C4-PFHpA	367.0 / 322.0	2.25	236.653880	250.00	94.66
13C8-PFOA	421.0 / 376.0	2.65	250.303847	250.00	100.12
13C9-PFNA	472.0 / 427.0	3.05	245.581612	250.00	98.23
13C6-PFDA	519.0 / 474.0	3.40	236.274350	250.00	94.51
13C7-PFUnA	570.0 / 525.0	3.72	263.268331	250.00	105.31
13C2-PFTeDA	715.0 / 670.0	4.48	239.068729	250.00	95.63
13C3-PFBS	302.0 / 99.0	1.52	192.754666	232.25	82.99
13C3-PFHxS	402.0 / 99.0	2.27	212.061970	236.50	89.67
13C8-PFOS	507.0 / 99.0	3.05	189.347670	239.25	79.14

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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	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	296877.48	925.435980	482.3	false
PFBS_2	298.9 / 99.0	1.54	90909.55	950.236372	282.0	false
PFHxA_1	313.0 / 269.0	1.86	217093.67	879.267704	36.6	false
PFHxA_2	313.0 / 119.0	1.86	16972.25	949.504440	22.6	false
PFHpA_1	363.0 / 319.0	2.27	215468.22	964.602765	102.4	false
PFHpA_2	363.0 / 169.0	2.27	5393.75	1223.585962	110.6	false
PFHxS_1	399.0 / 80.0	2.30	359478.13	889.617656	351.4	false
PFHxS_2	399.0 / 99.0	2.29	99045.52	858.021180	363.7	false
PFOA_1	413.0 / 369.0	2.68	315096.35	865.140938	275.6	false
PFOA_2	413.0 / 169.0	2.68	18384.18	875.419686	201.1	false
PFNA_1	463.0 / 419.0	3.08	315104.60	952.628861	358.1	false
PFNA_2	463.0 / 219.0	3.08	97554.83	965.063864	337.2	false
PFOS_1	499.0 / 80.0	3.08	503138.84	1025.902305	227.7	false
PFOS_2	499.0 / 99.0	3.08	89366.71	1013.860679	403.9	false
PFDA_1	513.0 / 469.0	3.44	351373.08	932.797929	425.8	false
PFDA_2	513.0 / 219.0	3.44	12651.11	834.143591	150.4	false
PFUnA_1	563.0 / 519.0	3.76	330436.07	958.510248	296.0	false
PFUnA_2	563.0 / 269.0	3.76	16992.68	951.670001	221.5	false
PFDoA_1	613.0 / 569.0	4.05	309663.77	895.168832	435.7	false
PFDoA_2	613.0 / 319.0	4.05	47964.58	887.918400	329.0	false
PFTrDA_1	663.0 / 619.0	4.30	290122.51	997.200651	584.3	false
PFTrDA_2	663.0 / 169.0	4.29	17930.65	956.042222	394.5	false
PFTeDA_1	713.0 / 669.0	4.51	321499.58	986.644713	1289.1	false
PFTeDA_2	713.0 / 169.0	4.51	14831.62	966.965594	569.7	false
NMeFOSAA_1	570.0 / 419.0	3.59	57580.04	947.445233	858.6	false
NMeFOSAA_2	570.0 / 512.0	3.59	30788.84	844.344682	676.5	false
NEtFOSAA_1	584.0 / 419.0	3.75	50075.43	1009.319182	566.8	false
NEtFOSAA_2	584.0 / 483.0	3.75	2667.21	860.050415	784.9	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	35
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	296141.75	995.403138	379.5	false
PFBS_2	298.9 / 99.0	1.53	89177.80	1005.439060	245.8	false
PFHxA_1	313.0 / 269.0	1.85	225207.08	980.223033	40.9	false
PFHxA_2	313.0 / 119.0	1.85	15500.55	929.802998	26.3	false
PFHpA_1	363.0 / 319.0	2.26	212776.84	941.032703	104.1	false
PFHpA_2	363.0 / 169.0	2.26	4719.82	1056.767175	91.0	false
PFHxS_1	399.0 / 80.0	2.28	343903.26	916.111865	283.4	false
PFHxS_2	399.0 / 99.0	2.28	104253.30	973.744003	365.9	false
PFOA_1	413.0 / 369.0	2.67	333518.45	1014.378129	271.5	false
PFOA_2	413.0 / 169.0	2.67	19877.71	1042.740849	243.6	false
PFNA_1	463.0 / 419.0	3.07	300117.53	1019.976190	393.7	false
PFNA_2	463.0 / 219.0	3.07	92747.18	1031.215341	330.8	false
PFOS_1	499.0 / 80.0	3.07	502302.69	1117.914554	296.7	false
PFOS_2	499.0 / 99.0	3.06	89272.16	1107.366129	466.9	false
PFDA_1	513.0 / 469.0	3.42	361176.56	1045.406017	355.2	false
PFDA_2	513.0 / 219.0	3.42	13533.76	975.040409	237.4	false
PFUnA_1	563.0 / 519.0	3.75	362041.17	963.878456	300.7	false
PFUnA_2	563.0 / 269.0	3.75	17042.83	867.555530	212.2	false
PFDoA_1	613.0 / 569.0	4.03	312853.54	1034.445696	368.2	false
PFDoA_2	613.0 / 319.0	4.03	45816.74	969.334929	318.5	false
PFTrDA_1	663.0 / 619.0	4.28	290964.76	1091.320783	576.7	false
PFTrDA_2	663.0 / 169.0	4.28	19338.20	1130.627354	275.2	false
PFTeDA_1	713.0 / 669.0	4.49	325207.95	1089.440040	1309.7	false
PFTeDA_2	713.0 / 169.0	4.49	14957.38	1066.567209	665.8	false
NMeFOSAA_1	570.0 / 419.0	3.58	51396.05	1093.178594	540.7	false
NMeFOSAA_2	570.0 / 512.0	3.58	27288.51	981.123905	366.2	false
NEtFOSAA_1	584.0 / 419.0	3.74	52580.43	936.532073	554.4	false
NEtFOSAA_2	584.0 / 483.0	3.74	3022.47	859.070188	236.3	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	864995.71	2417.927187	740.0	false
PFBS_2	298.9 / 99.0	1.54	255989.83	2413.818920	479.5	false
PFHxA_1	313.0 / 269.0	1.85	618300.67	2397.476772	68.4	false
PFHxA_2	313.0 / 119.0	1.85	47157.25	2510.385090	46.2	false
PFHpA_1	363.0 / 319.0	2.26	573188.19	2296.516788	169.1	false
PFHpA_2	363.0 / 169.0	2.26	12452.17	2529.036877	156.2	false
PFHxS_1	399.0 / 80.0	2.28	925661.01	2387.486641	723.1	false
PFHxS_2	399.0 / 99.0	2.28	261133.30	2358.927270	919.0	false
PFOA_1	413.0 / 369.0	2.67	893509.46	2582.383428	478.0	false
PFOA_2	413.0 / 169.0	2.67	55088.99	2698.539862	453.0	false
PFNA_1	463.0 / 419.0	3.06	787070.30	2381.641825	543.1	false
PFNA_2	463.0 / 219.0	3.06	251320.90	2487.176627	636.2	false
PFOS_1	499.0 / 80.0	3.06	1376960.57	2629.609497	305.0	false
PFOS_2	499.0 / 99.0	3.06	241653.87	2599.783288	729.0	false
PFDA_1	513.0 / 469.0	3.42	939399.98	2284.157206	578.4	false
PFDA_2	513.0 / 219.0	3.42	40713.87	2480.951182	316.6	false
PFUnA_1	563.0 / 519.0	3.74	920227.00	2186.390863	408.7	false
PFUnA_2	563.0 / 269.0	3.74	40918.44	1981.302206	245.6	false
PFDoA_1	613.0 / 569.0	4.03	848559.52	2498.152817	541.1	false
PFDoA_2	613.0 / 319.0	4.03	139789.79	2653.152293	481.4	false
PFTrDA_1	663.0 / 619.0	4.28	770924.55	2608.719122	970.9	false
PFTrDA_2	663.0 / 169.0	4.27	49578.24	2632.808265	526.0	false
PFTeDA_1	713.0 / 669.0	4.49	856083.14	2587.933192	1316.1	false
PFTeDA_2	713.0 / 169.0	4.49	40034.18	2607.493569	862.1	false
NMeFOSAA_1	570.0 / 419.0	3.58	148687.01	2740.558025	879.1	false
NMeFOSAA_2	570.0 / 512.0	3.58	75237.52	2478.293299	546.6	false
NEtFOSAA_1	584.0 / 419.0	3.74	143530.94	2277.228754	865.8	false
NEtFOSAA_2	584.0 / 483.0	3.73	9187.74	2479.207911	1146.9	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	3
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	237892.55	981.784864	312.0	false
PFBS_2	298.9 / 99.0	1.53	69828.48	965.928846	227.4	false
PFHxA_1	313.0 / 269.0	1.85	176912.52	1013.362497	34.7	false
PFHxA_2	313.0 / 119.0	1.85	12235.95	965.749847	21.2	false
PFHpA_1	363.0 / 319.0	2.26	165747.55	977.210844	85.6	false
PFHpA_2	363.0 / 169.0	2.25	3135.42	934.712384	64.5	false
PFHxS_1	399.0 / 80.0	2.28	262151.77	861.585974	266.9	false
PFHxS_2	399.0 / 99.0	2.28	75707.83	871.741228	410.9	false
PFOA_1	413.0 / 369.0	2.66	248936.64	994.638104	206.3	false
PFOA_2	413.0 / 169.0	2.66	14558.50	1004.398683	207.2	false
PFNA_1	463.0 / 419.0	3.06	232176.53	1059.488054	283.2	false
PFNA_2	463.0 / 219.0	3.06	70091.29	1045.239334	253.6	false
PFOS_1	499.0 / 80.0	3.06	391971.32	1023.767479	189.1	false
PFOS_2	499.0 / 99.0	3.06	71841.46	1045.000306	395.7	false
PFDA_1	513.0 / 469.0	3.41	269229.55	935.964407	398.5	false
PFDA_2	513.0 / 219.0	3.41	11128.13	963.836495	300.3	false
PFUnA_1	563.0 / 519.0	3.73	287491.36	1037.752841	293.5	false
PFUnA_2	563.0 / 269.0	3.73	16258.34	1153.465005	209.1	false
PFDoA_1	613.0 / 569.0	4.02	248209.45	1041.741900	335.4	false
PFDoA_2	613.0 / 319.0	4.02	37154.25	998.651285	298.6	false
PFTrDA_1	663.0 / 619.0	4.26	222430.67	1034.305724	544.1	false
PFTrDA_2	663.0 / 169.0	4.26	14616.13	1058.138207	285.5	false
PFTeDA_1	713.0 / 669.0	4.48	233082.79	965.854728	885.9	false
PFTeDA_2	713.0 / 169.0	4.48	10771.00	947.837270	559.8	false
NMeFOSAA_1	570.0 / 419.0	3.57	40205.75	1005.381761	1234.0	false
NMeFOSAA_2	570.0 / 512.0	3.57	21644.89	909.487107	412.0	false
NEtFOSAA_1	584.0 / 419.0	3.73	44419.04	1100.808427	410.9	false
NEtFOSAA_2	584.0 / 483.0	3.72	3166.24	1286.611789	250.9	true

Sample Name	KB77 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	790654.35	2618.538405	658.7	false
PFBS_2	298.9 / 99.0	1.53	225875.02	2523.454240	449.8	false
PFHxA_1	313.0 / 269.0	1.85	571801.77	2414.953985	62.5	false
PFHxA_2	313.0 / 119.0	1.85	45381.90	2631.721050	46.1	false
PFHpA_1	363.0 / 319.0	2.26	542408.72	2407.707049	169.4	false
PFHpA_2	363.0 / 169.0	2.25	11846.80	2665.898057	185.3	false
PFHxS_1	399.0 / 80.0	2.28	888151.00	2478.608784	463.6	false
PFHxS_2	399.0 / 99.0	2.28	250530.05	2448.753553	610.0	false
PFOA_1	413.0 / 369.0	2.67	842924.24	2430.684244	425.1	false
PFOA_2	413.0 / 169.0	2.67	46597.98	2282.079114	417.7	false
PFNA_1	463.0 / 419.0	3.06	749260.46	2579.529090	502.9	false
PFNA_2	463.0 / 219.0	3.06	232159.67	2612.371058	489.9	false
PFOS_1	499.0 / 80.0	3.06	1308871.32	2722.127690	346.8	false
PFOS_2	499.0 / 99.0	3.06	232869.59	2729.536249	633.8	false
PFDA_1	513.0 / 469.0	3.42	915939.43	2534.222686	787.9	false
PFDA_2	513.0 / 219.0	3.42	41818.81	2901.723207	496.4	false
PFUnA_1	563.0 / 519.0	3.74	953944.10	2497.834896	477.2	false
PFUnA_2	563.0 / 269.0	3.74	44246.80	2381.658019	326.7	false
PFDoA_1	613.0 / 569.0	4.02	785432.48	2544.545066	651.7	false
PFDoA_2	613.0 / 319.0	4.02	121666.74	2539.047004	623.2	false
PFTrDA_1	663.0 / 619.0	4.27	731825.98	2551.708640	852.2	false
PFTrDA_2	663.0 / 169.0	4.27	47449.22	2596.429572	527.2	false
PFTeDA_1	713.0 / 669.0	4.49	790173.93	2460.343220	1652.5	false
PFTeDA_2	713.0 / 169.0	4.48	35919.16	2407.060266	751.1	false
NMeFOSAA_1	570.0 / 419.0	3.57	131850.02	2790.523735	616.6	false
NMeFOSAA_2	570.0 / 512.0	3.57	75583.31	2886.592458	456.4	false
NEtFOSAA_1	584.0 / 419.0	3.73	136134.19	2397.243044	885.7	false
NEtFOSAA_2	584.0 / 483.0	3.73	8949.17	2687.008450	609.0	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	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	95135.72	276.754344	993.3	false
d3-MeFOSAA	573.0 / 419.0	3.59	14894.97	256.502272	223.2	false
d5-EtFOSAA	589.0 / 419.0	3.75	12251.47	205.964344	160.9	false
13C5-PFHxA	318.0 / 273.0	1.85	61132.74	232.644972	537.8	false
13C4-PFHpA	367.0 / 322.0	2.26	63973.94	216.588781	604.6	false
13C8-PFOA	421.0 / 376.0	2.67	87660.16	243.586025	1335.9	false
13C9-PFNA	472.0 / 427.0	3.06	90548.20	251.131162	1365.9	false
13C6-PFDA	519.0 / 474.0	3.42	90137.54	262.700560	1984.7	false
13C7-PFUnA	570.0 / 525.0	3.74	80361.02	255.397242	520.0	false
13C2-PFTeDA	715.0 / 670.0	4.51	70155.09	255.314914	1608.1	false
13C3-PFBS	302.0 / 99.0	1.53	26831.39	212.938723	535.7	false
13C3-PFHxS	402.0 / 99.0	2.28	27255.56	238.736615	306.6	false
13C8-PFOS	507.0 / 99.0	3.06	24145.02	201.629894	229.3	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	35
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	83518.82	250.564842	710.0	false
d3-MeFOSAA	573.0 / 419.0	3.57	11584.58	216.858160	138.3	false
d5-EtFOSAA	589.0 / 419.0	3.73	14412.55	263.383521	175.5	false
13C5-PFHxA	318.0 / 273.0	1.84	57002.18	233.492537	593.1	false
13C4-PFHpA	367.0 / 322.0	2.25	64748.43	235.952116	724.0	false
13C8-PFOA	421.0 / 376.0	2.66	79123.22	236.655051	2858.8	false
13C9-PFNA	472.0 / 427.0	3.05	80803.26	241.218926	864.0	false
13C6-PFDA	519.0 / 474.0	3.41	82771.89	248.784377	937.5	false
13C7-PFUnA	570.0 / 525.0	3.73	87556.69	286.975660	677.0	false
13C2-PFTeDA	715.0 / 670.0	4.49	64474.51	241.985895	2410.4	false
13C3-PFBS	302.0 / 99.0	1.52	24907.73	214.876792	376.5	false
13C3-PFHxS	402.0 / 99.0	2.27	25666.23	244.382356	329.8	false
13C8-PFOS	507.0 / 99.0	3.05	21904.46	198.840027	194.2	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	95286.81	246.274792	678.1	false
d3-MeFOSAA	573.0 / 419.0	3.57	14410.14	231.135732	195.9	false
d5-EtFOSAA	589.0 / 419.0	3.73	15718.51	246.128938	183.5	false
13C5-PFHxA	318.0 / 273.0	1.84	64665.53	235.916274	478.9	false
13C4-PFHpA	367.0 / 322.0	2.25	71706.36	232.731848	694.1	false
13C8-PFOA	421.0 / 376.0	2.66	83223.32	221.697298	1212.2	false
13C9-PFNA	472.0 / 427.0	3.05	93149.06	247.664963	1001.8	false
13C6-PFDA	519.0 / 474.0	3.41	99067.79	256.521668	606.8	false
13C7-PFUnA	570.0 / 525.0	3.73	98087.16	276.961400	1055.1	false
13C2-PFTeDA	715.0 / 670.0	4.49	72745.20	235.211039	1833.7	false
13C3-PFBS	302.0 / 99.0	1.52	30178.41	223.077260	415.6	false
13C3-PFHxS	402.0 / 99.0	2.27	27097.96	221.079210	258.1	false
13C8-PFOS	507.0 / 99.0	3.05	26037.19	202.520512	218.6	false

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Summary Quant Report

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Sample Name	KB76 CCV	**Injection Vial**	3
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	65809.71	260.119992	641.1	false
d3-MeFOSAA	573.0 / 419.0	3.56	9763.70	295.899542	153.7	false
d5-EtFOSAA	589.0 / 419.0	3.72	9841.92	291.180290	157.8	false
13C5-PFHxA	318.0 / 273.0	1.84	43339.20	227.368473	435.5	false
13C4-PFHpA	367.0 / 322.0	2.25	48579.99	226.735659	485.7	false
13C8-PFOA	421.0 / 376.0	2.65	60230.27	230.724888	2181.9	false
13C9-PFNA	472.0 / 427.0	3.04	60280.78	230.477841	643.4	false
13C6-PFDA	519.0 / 474.0	3.40	68834.26	272.579252	980.2	false
13C7-PFUnA	570.0 / 525.0	3.72	64575.93	278.852372	762.3	false
13C2-PFTeDA	715.0 / 670.0	4.47	51918.40	256.726807	1249.2	false
13C3-PFBS	302.0 / 99.0	1.52	20282.46	283.276402	285.9	false
13C3-PFHxS	402.0 / 99.0	2.27	19917.25	307.023355	313.7	true
13C8-PFOS	507.0 / 99.0	3.04	18899.25	277.747449	188.9	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	86607.75	234.499515	753.6	false
d3-MeFOSAA	573.0 / 419.0	3.57	12733.04	209.000085	127.6	false
d5-EtFOSAA	589.0 / 419.0	3.72	14354.87	230.020313	200.7	false
13C5-PFHxA	318.0 / 273.0	1.84	59372.76	243.999606	689.9	false
13C4-PFHpA	367.0 / 322.0	2.25	64728.97	236.653880	673.0	false
13C8-PFOA	421.0 / 376.0	2.65	83413.31	250.303847	2550.4	false
13C9-PFNA	472.0 / 427.0	3.05	81996.06	245.581612	704.6	false
13C6-PFDA	519.0 / 474.0	3.40	87101.77	236.274350	724.6	false
13C7-PFUnA	570.0 / 525.0	3.72	89000.72	263.268331	897.0	false
13C2-PFTeDA	715.0 / 670.0	4.48	70578.34	239.068729	1310.5	false
13C3-PFBS	302.0 / 99.0	1.52	25481.82	192.754666	411.4	false
13C3-PFHxS	402.0 / 99.0	2.27	25400.13	212.061970	379.5	false
13C8-PFOS	507.0 / 99.0	3.05	23788.64	189.347670	211.8	false

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Summary Ion Ratio 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	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.55	PFBS			
PFBS_2	298.9 / 99.0	1.54	PFBS	0.310	0.302	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.080	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.030	0.020	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.44	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.76	PFUnA			
PFUnA_2	563.0 / 269.0	3.76	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.150	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.29	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.51	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.51	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.530	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.050	0.074	ü

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Summary Ion Ratio Report

Sample Name	KB76 CCV	**Injection Vial**	35
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.300	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.060	0.058	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	3.06	PFOS	0.180	0.185	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	3.75	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.150	0.158	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.530	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.060	0.074	ü

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Summary Ion Ratio Report

Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.080	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.320	0.306	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.185	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	0.040	0.054	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.158	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	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.510	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.060	0.074	ü

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Summary Ion Ratio Report

Sample Name	KB76 CCV	**Injection Vial**	3
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.290	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.300	0.306	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	3.73	PFUnA	0.060	0.054	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.150	0.158	ü
PFTrDA_1	663.0 / 619.0	4.26	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	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.57	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.57	NMeFOSAA	0.540	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.72	NEtFOSAA	0.070	0.074	ü

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Summary Ion Ratio Report

Sample Name	KB77 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.290	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.080	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.050	0.041	ü
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	3.74	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.150	0.158	ü
PFTrDA_1	663.0 / 619.0	4.27	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	4.48	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.57	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.57	NMeFOSAA	0.570	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.070	0.074	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	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	26831.39	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	26831.39	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	61132.74	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	61132.74	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	63973.94	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	63973.94	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	27470.00	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	27470.00	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	87660.16	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	87660.16	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	90548.20	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	90548.20	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	24828.88	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	24828.88	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	90137.54	250.00
PFDA_2	513.0 / 219.0	3.44	13C6-PFDA	519.0 / 474.0	90137.54	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	80361.02	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	80361.02	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	95135.72	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	95135.72	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	70155.09	250.00
PFTrDA_2	663.0 / 169.0	4.29	13C2-PFTeDA	715.0 / 670.0	70155.09	250.00
PFTeDA_1	713.0 / 669.0	4.51	13C2-PFTeDA	715.0 / 670.0	70155.09	250.00
PFTeDA_2	713.0 / 169.0	4.51	13C2-PFTeDA	715.0 / 670.0	70155.09	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	15217.23	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	15217.23	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	12589.68	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	12589.68	250.00

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	35
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	24907.73	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	24907.73	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	57002.18	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	57002.18	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	64748.43	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	64748.43	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	25532.65	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	25532.65	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	79123.22	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	79123.22	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	80803.26	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	80803.26	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	22767.70	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	22767.70	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	82771.89	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	82771.89	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	87556.69	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	87556.69	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	83518.82	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	83518.82	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	64474.51	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	64474.51	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	64474.51	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	64474.51	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	11915.99	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	11915.99	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	14281.77	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	14281.77	250.00

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	30178.41	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	30178.41	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	64665.53	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	64665.53	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	71706.36	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	71706.36	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	26648.15	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	26648.15	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	83223.32	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	83223.32	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	93149.06	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	93149.06	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	26685.87	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	26685.87	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	99067.79	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	99067.79	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	98087.16	250.00
PFUnA_2	563.0 / 269.0	3.74	13C7-PFUnA	570.0 / 525.0	98087.16	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	95286.81	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	95286.81	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	72745.20	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	72745.20	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	72745.20	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	72745.20	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	14440.17	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	14440.17	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	15719.00	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	15719.00	250.00

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	3
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	20282.46	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	20282.46	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	43339.20	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	43339.20	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	48579.99	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	48579.99	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	20672.74	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	20672.74	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	60230.27	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	60230.27	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	60280.78	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	60280.78	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	19382.89	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	19382.89	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	68834.26	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	68834.26	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	64575.93	250.00
PFUnA_2	563.0 / 269.0	3.73	13C7-PFUnA	570.0 / 525.0	64575.93	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	65809.71	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	65809.71	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	51918.40	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	51918.40	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	51918.40	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	51918.40	250.00
NMeFOSAA_1	570.0 / 419.0	3.57	d3-MeFOSAA	573.0 / 419.0	10065.77	250.00
NMeFOSAA_2	570.0 / 512.0	3.57	d3-MeFOSAA	573.0 / 419.0	10065.77	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	10212.77	250.00
NEtFOSAA_2	584.0 / 483.0	3.72	d5-EtFOSAA	589.0 / 419.0	10212.77	250.00

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	25481.82	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	25481.82	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	59372.76	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	59372.76	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	64728.97	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	64728.97	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	24634.26	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	24634.26	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	83413.31	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	83413.31	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	81996.06	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	81996.06	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	24507.68	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	24507.68	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	87101.77	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	87101.77	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	89000.72	250.00
PFUnA_2	563.0 / 269.0	3.74	13C7-PFUnA	570.0 / 525.0	89000.72	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	86607.75	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	86607.75	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	70578.34	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	70578.34	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	70578.34	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	70578.34	250.00
NMeFOSAA_1	570.0 / 419.0	3.57	d3-MeFOSAA	573.0 / 419.0	12583.21	250.00
NMeFOSAA_2	570.0 / 512.0	3.57	d3-MeFOSAA	573.0 / 419.0	12583.21	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	14152.84	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	14152.84	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	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	89002.65	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	29947.74	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	29947.74	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	84191.62	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	84191.62	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	84191.62	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	84191.62	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	89002.65	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	89002.65	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	89002.65	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	29947.74	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	29947.74	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	29947.74	239.25

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	35
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	86301.42	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	27549.91	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	27549.91	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	78218.08	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	78218.08	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	78218.08	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	78218.08	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	86301.42	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	86301.42	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	86301.42	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27549.91	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	27549.91	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	27549.91	239.25

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	100176.67	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	32152.64	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	32152.64	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	87822.06	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	87822.06	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	87822.06	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	87822.06	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	100176.67	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	100176.67	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	100176.67	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	32152.64	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	32152.64	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	32152.64	239.25

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	3
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	65504.33	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	17017.11	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	17017.11	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	61071.61	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	61071.61	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	61071.61	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	61071.61	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	65504.33	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	65504.33	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	65504.33	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	17017.11	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	17017.11	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	17017.11	239.25

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	95624.37	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	31419.64	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	31419.64	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	77962.69	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	77962.69	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	77962.69	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	77962.69	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	95624.37	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	95624.37	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	95624.37	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	31419.64	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	31419.64	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	31419.64	239.25

Raw Analytical Data

BATTELLE

Summary Quant Report

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:41:02	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	4373.77	2.164632	16.0	true
PFBS_2	298.9 / 99.0	1.56	2029.35	0.577695	16.6	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.30	5352.10	0.327008	29.4	false
PFHxS_2	399.0 / 99.0	2.30	1556.21	0.663660	23.1	false
PFOA_1	413.0 / 369.0	2.69	7801.49	22.788502	28.8	false
PFOA_2	413.0 / 169.0	2.69	567.97	56.728950	21.3	false
PFNA_1	463.0 / 419.0	3.08	5655.36	< 0	32.2	false
PFNA_2	463.0 / 219.0	3.09	1076.76	< 0	19.5	false
PFOS_1	499.0 / 80.0	3.08	11070.40	10.902350	20.2	false
PFOS_2	499.0 / 99.0	3.09	2595.91	< 0	29.4	false
PFDA_1	513.0 / 469.0	3.44	5527.60	5.057310	32.7	false
PFDA_2	513.0 / 219.0	3.45	461.28	12.789867	22.3	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.05	5155.84	< 0	61.1	false
PFDoA_2	613.0 / 319.0	4.05	832.74	< 0	43.5	false
PFTrDA_1	663.0 / 619.0	4.30	4077.14	< 0	125.1	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	4.52	4950.78	< 0	142.1	false
PFTeDA_2	713.0 / 169.0	4.53	509.14	< 0	38.1	true
NMeFOSAA_1	570.0 / 419.0	3.59	582.82	< 0	21.4	false
NMeFOSAA_2	570.0 / 512.0	3.60	672.60	< 0	95.0	false
NEtFOSAA_1	584.0 / 419.0	3.76	1126.52	52.382076	36.4	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	CR894PB-FS(3)	**Injection Vial**	25
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:24:29	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	CR895LCS-FS(3)	**Injection Vial**	26
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:35:21	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	1095854.09	3132.786097	876.2	false
PFBS_2	298.9 / 99.0	1.54	330302.05	3188.735731	615.1	false
PFHxA_1	313.0 / 269.0	1.86	811543.07	2514.242066	76.1	false
PFHxA_2	313.0 / 119.0	1.86	59693.07	2538.207991	49.2	false
PFHpA_1	363.0 / 319.0	2.27	760935.50	2517.550285	195.7	false
PFHpA_2	363.0 / 169.0	2.27	14726.00	2469.059173	233.2	false
PFHxS_1	399.0 / 80.0	2.29	1197620.10	2666.352509	399.8	false
PFHxS_2	399.0 / 99.0	2.29	347426.21	2709.558730	688.3	false
PFOA_1	413.0 / 369.0	2.68	1115766.40	2546.636221	582.6	false
PFOA_2	413.0 / 169.0	2.68	65861.27	2549.465632	540.8	false
PFNA_1	463.0 / 419.0	3.08	1005744.47	2736.363933	580.7	false
PFNA_2	463.0 / 219.0	3.08	312592.78	2779.782765	582.1	false
PFOS_1	499.0 / 80.0	3.08	1710344.34	2471.231849	374.4	false
PFOS_2	499.0 / 99.0	3.07	312040.74	2539.845354	574.6	false
PFDA_1	513.0 / 469.0	3.43	1288466.17	2720.960672	633.0	false
PFDA_2	513.0 / 219.0	3.43	51366.10	2718.369354	493.2	false
PFUnA_1	563.0 / 519.0	3.76	1215010.87	2748.045350	529.1	false
PFUnA_2	563.0 / 269.0	3.76	63801.11	2992.642029	336.4	false
PFDoA_1	613.0 / 569.0	4.04	1108108.79	2642.829581	503.7	false
PFDoA_2	613.0 / 319.0	4.04	177756.93	2732.549729	743.8	false
PFTrDA_1	663.0 / 619.0	4.29	1043694.90	2785.210661	910.6	false
PFTrDA_2	663.0 / 169.0	4.29	65892.70	2759.638468	518.0	false
PFTeDA_1	713.0 / 669.0	4.51	1160099.23	2765.761859	1669.8	false
PFTeDA_2	713.0 / 169.0	4.50	54422.64	2797.107316	901.9	false
NMeFOSAA_1	570.0 / 419.0	3.59	189906.72	3256.720863	4794.0	false
NMeFOSAA_2	570.0 / 512.0	3.59	95744.77	2953.151471	763.6	false
NEtFOSAA_1	584.0 / 419.0	3.75	179811.99	2866.152636	797.0	false
NEtFOSAA_2	584.0 / 483.0	3.75	11703.26	3198.773716	292.5	false

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Summary Quant Report

Sample Name	J8381-FS(3)	**Injection Vial**	27
Sample ID	VC-PM64B-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:46:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	8215.61	7.403541	31.2	true
PFBS_2	298.9 / 99.0	1.53	3351.16	4.946676	22.7	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	6251.94	15.379746	10.3	false
PFHpA_2	363.0 / 169.0	2.30	164.97	19.261149	4.9	false
PFHxS_1	399.0 / 80.0	2.29	118002.34	249.800491	198.2	false
PFHxS_2	399.0 / 99.0	2.29	34327.07	254.862721	233.0	false
PFOA_1	413.0 / 369.0	2.67	21898.57	46.239641	56.3	false
PFOA_2	413.0 / 169.0	2.67	1259.83	73.727774	34.8	false
PFNA_1	463.0 / 419.0	3.08	1875.42	< 0	13.3	false
PFNA_2	463.0 / 219.0	3.11	327.39	< 0	6.0	false
PFOS_1	499.0 / 80.0	3.07	361872.17	585.251774	176.3	false
PFOS_2	499.0 / 99.0	3.07	63934.35	566.168615	267.3	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	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	J8386-FS(3)	**Injection Vial**	28
Sample ID	VC-HS09-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:57:04	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	10061.37	15.918879	26.6	true
PFBS_2	298.9 / 99.0	1.54	3566.32	11.487624	24.4	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	24479.15	92.110055	27.8	false
PFHpA_2	363.0 / 169.0	2.23	616.34	116.029142	20.1	false
PFHxS_1	399.0 / 80.0	2.29	279570.21	696.339704	191.8	false
PFHxS_2	399.0 / 99.0	2.29	77405.09	674.853838	247.0	false
PFOA_1	413.0 / 369.0	2.68	240844.88	670.815726	227.1	false
PFOA_2	413.0 / 169.0	2.66	17646.00	852.951021	199.8	false
PFNA_1	463.0 / 419.0	3.08	7205.31	< 0	33.7	false
PFNA_2	463.0 / 219.0	3.07	3154.46	< 0	41.0	true
PFOS_1	499.0 / 80.0	3.08	1878393.06	3573.402496	417.3	false
PFOS_2	499.0 / 99.0	3.08	334484.51	3592.809776	657.1	false
PFDA_1	513.0 / 469.0	3.43	13670.74	23.181829	58.6	false
PFDA_2	513.0 / 219.0	3.42	332.11	0.644137	26.8	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	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	3.74	1350.79	65.293265	46.8	true
NEtFOSAA_2	584.0 / 483.0	3.74	290.13	70.550677	13.4	false

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Summary Quant Report

Sample Name	J8387-FS(3)	**Injection Vial**	29
Sample ID	VC-HS09-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:07:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	31720.10	64.316643	55.1	false
PFHxS_2	399.0 / 99.0	2.29	8923.33	63.182476	77.3	false
PFOA_1	413.0 / 369.0	2.67	48099.77	114.232858	87.5	false
PFOA_2	413.0 / 169.0	2.65	3791.79	179.812105	77.5	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.07	120890.05	179.189068	85.0	false
PFOS_2	499.0 / 99.0	3.07	21502.65	160.018711	135.7	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
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	J8388-FS(3)	**Injection Vial**	30
Sample ID	VC-HS09-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:18:49	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	1.41e4	21.192374	65.9	false
PFHxS_2	399.0 / 99.0	2.28	3.26e3	14.329961	45.1	false
PFOA_1	413.0 / 369.0	2.66	4.22e4	107.945008	83.5	false
PFOA_2	413.0 / 169.0	2.56	3.07e3	160.476802	64.7	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.07	2.30e4	28.050087	37.1	false
PFOS_2	499.0 / 99.0	3.07	3.78e3	4.303743	33.6	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	J8389-FS(3)	**Injection Vial**	31
Sample ID	VC-HS09-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:29:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	9270.15	26.223609	14.3	false
PFHpA_2	363.0 / 169.0	2.00	160.61	19.316077	11.3	false
PFHxS_1	399.0 / 80.0	2.28	15983.35	24.109610	61.6	false
PFHxS_2	399.0 / 99.0	2.28	4459.84	23.246236	52.7	false
PFOA_1	413.0 / 369.0	2.66	50619.67	113.043892	99.8	false
PFOA_2	413.0 / 169.0	2.67	2371.15	118.058504	55.1	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

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Sample Name	J8390-FS(3)	**Injection Vial**	32
Sample ID	VC-HS09-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:40:32	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2.28	7.65e3	5.816352	37.9	false
PFHxS_2	399.0 / 99.0	2.28	1.21e3	< 0	23.8	false
PFOA_1	413.0 / 369.0	2.67	5.06e4	129.454155	87.3	false
PFOA_2	413.0 / 169.0	2.67	2.97e3	156.580326	72.6	true
PFNA_1	463.0 / 419.0	3.07	4.12e3	< 0	22.5	false
PFNA_2	463.0 / 219.0	3.07	1.59e3	< 0	25.5	true
PFOS_1	499.0 / 80.0	3.07	1.44e5	255.435833	132.4	false
PFOS_2	499.0 / 99.0	3.06	2.45e4	225.083263	172.5	false
PFDA_1	513.0 / 469.0	3.42	9.30e3	12.086602	54.4	false
PFDA_2	513.0 / 219.0	3.17	4.15e2	5.444557	11.5	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	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	J8391-FS(3)	**Injection Vial**	33
Sample ID	VC-HS09-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:51:23	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2744.29	< 0	16.6	false
PFHxS_2	399.0 / 99.0	2.27	484.16	< 0	7.0	false
PFOA_1	413.0 / 369.0	2.67	11561.40	28.384205	36.2	false
PFOA_2	413.0 / 169.0	2.66	914.75	66.477703	18.7	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.06	70460.25	96.625695	77.9	false
PFOS_2	499.0 / 99.0	3.06	13390.27	84.070571	96.6	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	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	J8392-FS(3)	**Injection Vial**	34
Sample ID	VC-HS09-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:02:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2.28	3998.00	< 0	19.5	false
PFHxS_2	399.0 / 99.0	2.30	686.51	< 0	9.0	false
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	true
PFOA_2	413.0 / 169.0	2.56	1482.70	85.571984	49.8	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	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	J8393MS-FS(3)	**Injection Vial**	37
Sample ID	VC-HS09-SB03-0506-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:34:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2368316.18	6216.631511	1308.3	false
PFBS_2	298.9 / 99.0	1.54	719680.88	6389.537827	801.9	false
PFHxA_1	313.0 / 269.0	1.86	1648979.36	5726.210990	96.1	false
PFHxA_2	313.0 / 119.0	1.86	122578.94	5832.175648	83.9	false
PFHpA_1	363.0 / 319.0	2.27	1608255.81	5690.173882	274.3	false
PFHpA_2	363.0 / 169.0	2.26	31027.54	5567.315834	236.1	false
PFHxS_1	399.0 / 80.0	2.29	2499935.59	6284.048929	701.0	false
PFHxS_2	399.0 / 99.0	2.29	703270.86	6191.707001	1081.7	false
PFOA_1	413.0 / 369.0	2.67	2281195.96	5564.711193	910.7	false
PFOA_2	413.0 / 169.0	2.67	140040.88	5756.686569	570.1	false
PFNA_1	463.0 / 419.0	3.07	2102876.37	5987.985386	916.3	false
PFNA_2	463.0 / 219.0	3.07	673952.00	6271.563360	826.1	false
PFOS_1	499.0 / 80.0	3.07	3727195.31	5869.813531	448.8	false
PFOS_2	499.0 / 99.0	3.07	658301.43	5866.799169	709.8	false
PFDA_1	513.0 / 469.0	3.43	2490977.63	5877.419897	711.0	false
PFDA_2	513.0 / 219.0	3.43	102734.03	6086.499231	734.5	false
PFUnA_1	563.0 / 519.0	3.75	2575509.12	5976.215587	645.4	false
PFUnA_2	563.0 / 269.0	3.75	125659.78	6156.479968	395.5	false
PFDoA_1	613.0 / 569.0	4.03	2277234.52	5944.453686	594.8	false
PFDoA_2	613.0 / 319.0	4.03	364994.59	6149.905600	608.2	false
PFTrDA_1	663.0 / 619.0	4.28	2065349.45	5887.226669	1094.2	false
PFTrDA_2	663.0 / 169.0	4.28	134430.62	6033.810773	643.4	false
PFTeDA_1	713.0 / 669.0	4.50	2387379.96	6081.828597	1497.6	false
PFTeDA_2	713.0 / 169.0	4.49	110720.78	6105.039571	1340.2	false
NMeFOSAA_1	570.0 / 419.0	3.58	376194.33	6811.831474	1113.6	false
NMeFOSAA_2	570.0 / 512.0	3.58	206989.51	6883.125247	1445.5	false
NEtFOSAA_1	584.0 / 419.0	3.74	355217.75	5544.503510	621.5	false
NEtFOSAA_2	584.0 / 483.0	3.74	23036.24	6254.609100	444.4	false

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Summary Quant Report

Sample Name	J8394MSD-FS(3)	**Injection Vial**	38
Sample ID	VC-HS09-SB03-0506-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:45:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2560531.90	6560.898560	1116.8	false
PFBS_2	298.9 / 99.0	1.54	745916.86	6464.104171	912.8	false
PFHxA_1	313.0 / 269.0	1.86	1711792.60	5885.685211	94.3	false
PFHxA_2	313.0 / 119.0	1.86	133686.01	6298.154137	85.1	false
PFHpA_1	363.0 / 319.0	2.26	1686823.05	5781.385856	293.3	false
PFHpA_2	363.0 / 169.0	2.26	31438.44	5464.279071	221.4	false
PFHxS_1	399.0 / 80.0	2.28	2600645.38	6675.061023	763.5	false
PFHxS_2	399.0 / 99.0	2.28	728711.01	6550.932736	1258.5	false
PFOA_1	413.0 / 369.0	2.67	2444903.12	6303.050688	722.0	false
PFOA_2	413.0 / 169.0	2.67	137333.84	5965.305235	675.9	false
PFNA_1	463.0 / 419.0	3.07	2153994.57	6297.397905	932.4	false
PFNA_2	463.0 / 219.0	3.07	672614.23	6424.944615	1001.1	false
PFOS_1	499.0 / 80.0	3.07	3936970.33	6608.565749	506.0	false
PFOS_2	499.0 / 99.0	3.07	690048.82	6557.180900	890.2	false
PFDA_1	513.0 / 469.0	3.42	2571761.92	6075.717659	832.8	false
PFDA_2	513.0 / 219.0	3.42	103589.51	6144.789448	471.9	false
PFUnA_1	563.0 / 519.0	3.75	2585089.53	6290.969173	703.7	false
PFUnA_2	563.0 / 269.0	3.75	127729.87	6570.147860	451.9	false
PFDoA_1	613.0 / 569.0	4.03	2363449.08	6349.975065	641.8	false
PFDoA_2	613.0 / 319.0	4.03	350682.19	6079.340301	595.2	false
PFTrDA_1	663.0 / 619.0	4.28	2114627.33	6112.059787	1146.4	false
PFTrDA_2	663.0 / 169.0	4.27	136224.48	6199.961924	775.2	false
PFTeDA_1	713.0 / 669.0	4.49	2437405.35	6296.055707	1440.8	false
PFTeDA_2	713.0 / 169.0	4.49	112405.42	6284.995219	1213.9	false
NMeFOSAA_1	570.0 / 419.0	3.58	401913.96	7758.310121	1540.4	false
NMeFOSAA_2	570.0 / 512.0	3.58	213865.45	7588.187409	984.5	false
NEtFOSAA_1	584.0 / 419.0	3.74	374440.07	5871.175110	796.7	false
NEtFOSAA_2	584.0 / 483.0	3.74	23128.91	6310.886973	498.4	false

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Summary Quant Report

Sample Name	J8401-FS(3)	**Injection Vial**	39
Sample ID	VC-HS09-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:56:30	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	40769.51	80.673987	68.1	true
PFBS_2	298.9 / 99.0	1.54	12563.47	74.558588	54.1	true
PFHxA_1	313.0 / 269.0	1.85	118240.25	338.845441	22.4	false
PFHxA_2	313.0 / 119.0	1.86	6876.20	273.715532	13.0	false
PFHpA_1	363.0 / 319.0	2.26	52979.68	148.858641	47.9	false
PFHpA_2	363.0 / 169.0	2.25	1293.59	182.578197	30.2	false
PFHxS_1	399.0 / 80.0	2.29	691986.32	1400.601847	334.3	false
PFHxS_2	399.0 / 99.0	2.29	196425.02	1392.478992	446.6	false
PFOA_1	413.0 / 369.0	2.67	252397.08	539.766772	261.7	false
PFOA_2	413.0 / 169.0	2.67	11999.39	459.515526	197.9	false
PFNA_1	463.0 / 419.0	3.07	14163.76	< 0	42.7	false
PFNA_2	463.0 / 219.0	3.07	3780.03	< 0	42.8	false
PFOS_1	499.0 / 80.0	3.07	3179416.03	4360.400403	460.4	false
PFOS_2	499.0 / 99.0	3.07	568904.90	4410.160087	706.4	false
PFDA_1	513.0 / 469.0	3.43	11965.79	12.069897	69.4	false
PFDA_2	513.0 / 219.0	3.43	568.12	7.044317	19.4	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	3.74	3753.28	81.979309	103.7	false
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8402-FS(3)	**Injection Vial**	40
Sample ID	VC-HS09-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:07:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2.28	14217.43	18.278992	45.6	false
PFHxS_2	399.0 / 99.0	2.28	2689.11	6.833498	32.4	false
PFOA_1	413.0 / 369.0	2.67	51361.85	122.525278	95.4	false
PFOA_2	413.0 / 169.0	2.67	2152.23	115.427289	59.1	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.07	76917.82	113.474990	95.4	false
PFOS_2	499.0 / 99.0	3.07	12877.62	86.236686	104.0	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
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	3.74	1302.00	54.948511	32.5	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	J8403-FS(3)	**Injection Vial**	41
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:18:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	17921.94	27.815907	45.0	true
PFBS_2	298.9 / 99.0	1.53	6446.41	26.495860	37.6	true
PFHxA_1	313.0 / 269.0	1.85	209263.62	598.345176	37.0	false
PFHxA_2	313.0 / 119.0	1.85	13868.76	548.646146	19.9	false
PFHpA_1	363.0 / 319.0	2.26	184822.52	559.301319	98.2	false
PFHpA_2	363.0 / 169.0	2.26	3631.09	554.456679	81.7	false
PFHxS_1	399.0 / 80.0	2.28	4527216.69	9486.240017	1168.8	false
PFHxS_2	399.0 / 99.0	2.28	1265476.87	9287.395076	1274.8	false
PFOA_1	413.0 / 369.0	2.67	2440998.24	5279.028773	822.2	false
PFOA_2	413.0 / 169.0	2.67	178149.25	6488.566556	575.1	false
PFNA_1	463.0 / 419.0	3.07	125449.90	308.964295	199.8	false
PFNA_2	463.0 / 219.0	3.07	41950.32	343.119110	197.3	false
PFOS_1	499.0 / 80.0	3.06	60526401.77	95982.769061	838.5	false
PFOS_2	499.0 / 99.0	3.06	10732020.53	96633.283618	1574.9	false
PFDA_1	513.0 / 469.0	3.42	32631.15	51.846336	116.4	false
PFDA_2	513.0 / 219.0	3.29	1456.58	50.077041	56.0	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	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	J8403-FS-D(5)	**Injection Vial**	42
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:29:05	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	3.07	5905596.32	11466.352445	693.0	false
PFOS_2	499.0 / 99.0	3.07	1015315.74	11174.398994	1563.1	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8404-FS(3)	**Injection Vial**	43
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:39:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	7.31e4	188.981927	137.0	false
PFBS_2	298.9 / 99.0	1.53	2.28e4	190.467168	92.3	false
PFHxA_1	313.0 / 269.0	1.85	6.55e5	2269.866518	66.3	false
PFHxA_2	313.0 / 119.0	1.85	4.42e4	2102.818595	45.7	false
PFHpA_1	363.0 / 319.0	2.26	6.01e5	2240.592868	171.1	false
PFHpA_2	363.0 / 169.0	2.25	1.18e4	2232.460242	152.5	false
PFHxS_1	399.0 / 80.0	2.28	6.40e6	17233.734427	979.2	false
PFHxS_2	399.0 / 99.0	2.28	1.79e6	16899.784317	989.3	false
PFOA_1	413.0 / 369.0	2.66	7.79e6	21091.171521	946.7	false
PFOA_2	413.0 / 169.0	2.66	5.87e5	26692.685474	610.8	false
PFNA_1	463.0 / 419.0	3.06	5.66e4	126.134288	150.5	false
PFNA_2	463.0 / 219.0	3.06	1.95e4	148.946089	131.1	false
PFOS_1	499.0 / 80.0	3.06	2.44e7	46584.237637	618.7	false
PFOS_2	499.0 / 99.0	3.06	3.99e6	43360.643057	1200.7	true
PFDA_1	513.0 / 469.0	3.42	1.10e4	15.138510	43.6	false
PFDA_2	513.0 / 219.0	3.42	6.68e2	19.334233	25.1	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	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	J8404-FS-D(5)	**Injection Vial**	44
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:50:48	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2.28	2762062.52	7616.898986	875.1	false
PFHxS_2	399.0 / 99.0	2.28	752003.33	7262.959080	960.8	false
PFOA_1	413.0 / 369.0	2.67	3288279.97	8947.106613	676.8	false
PFOA_2	413.0 / 169.0	2.66	167313.73	7662.026623	377.0	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.06	10579638.80	17634.003824	497.8	false
PFOS_2	499.0 / 99.0	3.06	1789620.75	16919.194048	1163.9	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
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	J8404-FS-D(7)	**Injection Vial**	45
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:01:40	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	3.06	5066703.22	10409.960590	502.5	false
PFOS_2	499.0 / 99.0	3.06	887656.97	10336.460624	607.5	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	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	J8405-FS(3)	**Injection Vial**	48
Sample ID	VC-AOC16-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:34:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	327113.57	716.275654	371.8	false
PFBS_2	298.9 / 99.0	1.53	103543.29	758.754937	236.2	false
PFHxA_1	313.0 / 269.0	1.85	905675.85	2481.904104	72.1	false
PFHxA_2	313.0 / 119.0	1.85	57056.48	2144.622670	54.1	false
PFHpA_1	363.0 / 319.0	2.25	105414.92	303.996651	68.6	false
PFHpA_2	363.0 / 169.0	2.23	3175.55	464.352097	70.8	false
PFHxS_1	399.0 / 80.0	2.28	155648.87	294.310968	176.6	false
PFHxS_2	399.0 / 99.0	2.28	44295.51	293.356199	265.8	false
PFOA_1	413.0 / 369.0	2.66	118489.10	228.448519	179.5	false
PFOA_2	413.0 / 169.0	2.57	5361.12	202.600854	89.2	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.06	493505.61	587.401433	223.9	false
PFOS_2	499.0 / 99.0	3.06	84696.43	551.141222	350.1	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8406-FS(3)	**Injection Vial**	49
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:45:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	6.90e4	146.819996	113.7	false
PFBS_2	298.9 / 99.0	1.53	2.10e4	141.791326	76.8	true
PFHxA_1	313.0 / 269.0	1.85	5.91e5	1776.072446	63.7	false
PFHxA_2	313.0 / 119.0	1.85	3.73e4	1538.137181	46.8	false
PFHpA_1	363.0 / 319.0	2.25	1.05e5	340.635250	73.5	false
PFHpA_2	363.0 / 169.0	2.25	1.78e3	287.556502	26.0	false
PFHxS_1	399.0 / 80.0	2.28	4.50e6	9479.774425	817.2	false
PFHxS_2	399.0 / 99.0	2.28	1.30e6	9625.387091	803.5	false
PFOA_1	413.0 / 369.0	2.67	4.47e5	1083.569835	299.7	false
PFOA_2	413.0 / 169.0	2.66	3.39e4	1408.687998	292.6	false
PFNA_1	463.0 / 419.0	3.06	5.09e4	128.416700	121.2	false
PFNA_2	463.0 / 219.0	3.06	1.58e4	132.011591	110.2	false
PFOS_1	499.0 / 80.0	3.03	1.13e8	210561.392055	828.0	false
PFOS_2	499.0 / 99.0	3.06	2.22e7	235014.920704	2100.3	true
PFDA_1	513.0 / 469.0	3.42	2.68e4	39.702806	123.2	false
PFDA_2	513.0 / 219.0	3.42	1.18e3	35.681216	41.9	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	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	J8406-FS-D(5)	**Injection Vial**	50
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:55:58	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	3.06	8909690.49	14743.546151	721.6	true
PFOS_2	499.0 / 99.0	3.06	1667025.54	15646.129860	1476.0	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
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	J8407-FS(3)	**Injection Vial**	51
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:06:50	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	9.42e4	253.552102	157.2	false
PFBS_2	298.9 / 99.0	1.53	2.78e4	243.198765	99.7	false
PFHxA_1	313.0 / 269.0	1.84	7.89e5	2733.535400	74.0	false
PFHxA_2	313.0 / 119.0	1.85	5.02e4	2385.589891	55.2	false
PFHpA_1	363.0 / 319.0	2.25	2.43e5	856.158186	99.7	false
PFHpA_2	363.0 / 169.0	2.25	5.15e3	915.910392	67.7	false
PFHxS_1	399.0 / 80.0	2.27	9.08e6	21181.403308	785.3	false
PFHxS_2	399.0 / 99.0	2.27	2.57e6	20974.221302	1094.4	false
PFOA_1	413.0 / 369.0	2.66	2.26e6	6136.452573	668.5	false
PFOA_2	413.0 / 169.0	2.66	1.27e5	5804.932500	407.7	true
PFNA_1	463.0 / 419.0	3.05	8.59e4	238.691118	152.2	false
PFNA_2	463.0 / 219.0	3.05	2.95e4	274.236358	135.8	false
PFOS_1	499.0 / 80.0	3.00	8.25e7	154650.445600	419.9	false
PFOS_2	499.0 / 99.0	3.06	1.33e7	141458.774019	1387.3	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	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	J8407-FS-D(5)	**Injection Vial**	52
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:17:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	2.28	4.23e6	10752.925882	883.8	false
PFHxS_2	399.0 / 99.0	2.28	1.22e6	10872.274665	942.5	false
PFOA_1	413.0 / 369.0	N/A	N/A	N/A	N/A	true
PFOA_2	413.0 / 169.0	N/A	N/A	N/A	N/A	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.02	4.36e7	87387.236381	546.6	false
PFOS_2	499.0 / 99.0	3.06	6.50e6	73892.692833	925.3	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	J8407-FS-D(7)	**Injection Vial**	53
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:28:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	3.02	7.46e6	12211.364897	422.3	false
PFOS_2	499.0 / 99.0	3.06	1.19e6	11028.250136	897.8	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	J8408-FS(3)	**Injection Vial**	54
Sample ID	VC-AOC16-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:39:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	546179.98	1580.220226	433.7	false
PFBS_2	298.9 / 99.0	1.53	173659.53	1692.786700	398.3	false
PFHxA_1	313.0 / 269.0	1.84	1652174.90	6216.388986	91.6	false
PFHxA_2	313.0 / 119.0	1.84	105624.91	5443.170046	81.2	false
PFHpA_1	363.0 / 319.0	2.25	136222.45	514.095237	84.8	false
PFHpA_2	363.0 / 169.0	2.24	2886.88	550.132008	53.6	false
PFHxS_1	399.0 / 80.0	2.27	544792.31	1531.550843	238.1	false
PFHxS_2	399.0 / 99.0	2.27	154019.01	1516.465789	352.2	false
PFOA_1	413.0 / 369.0	2.65	72728.86	189.250785	107.5	false
PFOA_2	413.0 / 169.0	2.55	8363.89	393.224768	101.3	false
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.04	1948559.78	3362.360654	285.2	false
PFOS_2	499.0 / 99.0	3.05	341886.31	3329.307658	632.8	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
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	J8409-FS(3)	**Injection Vial**	1
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:50:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	44450.49	98.183118	69.9	true
PFBS_2	298.9 / 99.0	1.53	13457.69	90.802827	63.5	true
PFHxA_1	313.0 / 269.0	1.84	369932.52	1171.950727	44.0	false
PFHxA_2	313.0 / 119.0	1.85	24941.25	1087.458122	35.4	false
PFHpA_1	363.0 / 319.0	2.25	106491.71	352.376376	69.5	false
PFHpA_2	363.0 / 169.0	2.25	2581.56	431.560743	49.9	false
PFHxS_1	399.0 / 80.0	2.28	4176119.34	10250.071369	561.6	false
PFHxS_2	399.0 / 99.0	2.28	1223384.79	10517.828962	952.1	false
PFOA_1	413.0 / 369.0	2.66	481408.22	1143.854405	288.6	false
PFOA_2	413.0 / 169.0	2.65	23905.30	981.573176	194.0	false
PFNA_1	463.0 / 419.0	3.06	45428.44	105.903426	103.2	false
PFNA_2	463.0 / 219.0	3.06	14576.59	114.532702	106.5	false
PFOS_1	499.0 / 80.0	3.06	80746830.10	176950.099949	821.9	false
PFOS_2	499.0 / 99.0	3.06	16927739.21	210657.296184	2771.4	false
PFDA_1	513.0 / 469.0	3.41	75981.94	146.864966	156.8	false
PFDA_2	513.0 / 219.0	3.41	2869.87	129.550311	79.0	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	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	J8409-FS-D(5)	**Injection Vial**	2
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:01:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	3.05	7949271.53	13636.193838	796.7	false
PFOS_2	499.0 / 99.0	3.05	1461592.43	14218.519568	1329.4	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8410-FS(3)	**Injection Vial**	5
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:33:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	23489.48	53.339381	65.1	true
PFBS_2	298.9 / 99.0	1.53	6513.02	39.089552	36.1	true
PFHxA_1	313.0 / 269.0	1.84	341819.29	1290.454181	45.0	false
PFHxA_2	313.0 / 119.0	1.85	21356.16	1108.295492	31.4	false
PFHpA_1	363.0 / 319.0	2.26	83726.73	338.434287	63.9	false
PFHpA_2	363.0 / 169.0	2.25	2440.47	499.969235	41.7	false
PFHxS_1	399.0 / 80.0	2.28	1621400.11	4851.478313	700.6	false
PFHxS_2	399.0 / 99.0	2.28	465565.34	4879.401673	760.3	false
PFOA_1	413.0 / 369.0	2.66	366020.69	950.913438	261.2	false
PFOA_2	413.0 / 169.0	2.65	28187.23	1256.650468	185.3	false
PFNA_1	463.0 / 419.0	3.06	27950.12	55.363662	84.0	false
PFNA_2	463.0 / 219.0	3.06	9394.02	66.709913	84.7	false
PFOS_1	499.0 / 80.0	3.06	53071281.39	111505.033452	1268.4	false
PFOS_2	499.0 / 99.0	3.06	9854190.35	117563.216662	3047.3	false
PFDA_1	513.0 / 469.0	3.41	19499.04	33.182682	90.3	false
PFDA_2	513.0 / 219.0	3.40	826.81	26.668922	43.1	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	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	J8410-FS-D(5)	**Injection Vial**	6
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:44:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	3.06	4988237.79	9485.663840	670.1	false
PFOS_2	499.0 / 99.0	3.06	905031.09	9753.304040	1221.1	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8411-FS(3)	**Injection Vial**	7
Sample ID	VC-AOC16-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:55:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	236494.34	580.956989	283.9	false
PFBS_2	298.9 / 99.0	1.53	70972.27	580.591675	187.9	false
PFHxA_1	313.0 / 269.0	1.84	695701.51	2330.825397	72.8	false
PFHxA_2	313.0 / 119.0	1.85	41898.35	1925.249695	49.8	false
PFHpA_1	363.0 / 319.0	2.25	128362.45	454.904718	84.9	false
PFHpA_2	363.0 / 169.0	2.25	3549.37	637.285665	64.0	false
PFHxS_1	399.0 / 80.0	2.28	639847.35	1401.554547	281.6	false
PFHxS_2	399.0 / 99.0	2.27	182454.29	1399.860062	351.4	false
PFOA_1	413.0 / 369.0	2.66	3007843.22	7326.701160	614.3	false
PFOA_2	413.0 / 169.0	2.65	160143.16	6569.530028	396.1	true
PFNA_1	463.0 / 419.0	N/A	N/A	N/A	N/A	true
PFNA_2	463.0 / 219.0	N/A	N/A	N/A	N/A	true
PFOS_1	499.0 / 80.0	3.06	110075.26	148.331353	131.7	false
PFOS_2	499.0 / 99.0	3.06	20108.93	133.209528	186.7	false
PFDA_1	513.0 / 469.0	N/A	N/A	N/A	N/A	true
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
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**	9
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:41:02	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.04	80124.04	248.377776	782.6	false
d3-MeFOSAA	573.0 / 419.0	3.59	11745.22	216.980139	181.7	false
d5-EtFOSAA	589.0 / 419.0	3.75	12344.01	222.621640	151.9	false
13C5-PFHxA	318.0 / 273.0	1.86	54750.90	232.083677	683.2	false
13C4-PFHpA	367.0 / 322.0	2.26	61985.92	233.754207	432.9	false
13C8-PFOA	421.0 / 376.0	2.68	85450.51	264.483330	1747.4	false
13C9-PFNA	472.0 / 427.0	3.07	78595.95	242.803243	957.2	false
13C6-PFDA	519.0 / 474.0	3.43	85705.91	266.173683	10188.6	false
13C7-PFUnA	570.0 / 525.0	3.75	69477.27	235.294949	700.0	false
13C2-PFTeDA	715.0 / 670.0	4.51	64277.73	249.273775	1709.8	false
13C3-PFBS	302.0 / 99.0	1.53	24552.93	209.036451	395.2	false
13C3-PFHxS	402.0 / 99.0	2.29	23410.29	219.977323	253.8	false
13C8-PFOS	507.0 / 99.0	3.07	25235.30	226.070072	265.4	false

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Summary Quant Report

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Sample Name	CR894PB-FS(3)	**Injection Vial**	25
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:24:29	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	101549.32	300.148429	708.4	false
d3-MeFOSAA	573.0 / 419.0	3.58	13154.85	238.179684	197.1	false
d5-EtFOSAA	589.0 / 419.0	3.74	16408.61	290.030152	262.4	false
13C5-PFHxA	318.0 / 273.0	1.85	70832.52	291.781141	923.4	false
13C4-PFHpA	367.0 / 322.0	2.25	79280.14	290.537383	574.6	false
13C8-PFOA	421.0 / 376.0	2.67	97466.33	293.163196	1448.3	false
13C9-PFNA	472.0 / 427.0	3.06	92749.46	278.443414	905.5	false
13C6-PFDA	519.0 / 474.0	3.41	106501.37	315.368776	4384.2	false
13C7-PFUnA	570.0 / 525.0	3.74	98204.41	317.110053	620.4	false
13C2-PFTeDA	715.0 / 670.0	4.50	79679.79	294.627590	2389.4	false
13C3-PFBS	302.0 / 99.0	1.52	29357.18	244.958903	367.5	false
13C3-PFHxS	402.0 / 99.0	2.28	25863.36	238.186069	304.7	false
13C8-PFOS	507.0 / 99.0	3.06	29754.53	261.244934	237.9	false

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Summary Quant Report

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Printed: 17/10/2018 11:51:25 AM

Sample Name	CR895LCS-FS(3)	**Injection Vial**	26
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:35:21	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	117692.48	315.718327	1137.2	false
d3-MeFOSAA	573.0 / 419.0	3.58	15547.54	302.116656	172.1	false
d5-EtFOSAA	589.0 / 419.0	3.74	15004.66	284.637334	154.4	false
13C5-PFHxA	318.0 / 273.0	1.85	80961.83	321.725823	794.8	false
13C4-PFHpA	367.0 / 322.0	2.26	86853.33	307.047194	815.5	false
13C8-PFOA	421.0 / 376.0	2.67	105384.06	305.781223	215.4	false
13C9-PFNA	472.0 / 427.0	3.06	103865.11	300.798919	1010.2	false
13C6-PFDA	519.0 / 474.0	3.42	114150.89	306.785514	1081.3	false
13C7-PFUnA	570.0 / 525.0	3.74	103034.76	301.963726	1054.5	false
13C2-PFTeDA	715.0 / 670.0	4.50	92318.86	309.818754	2082.9	false
13C3-PFBS	302.0 / 99.0	1.52	29544.43	264.574933	537.7	false
13C3-PFHxS	402.0 / 99.0	2.28	31448.71	310.833915	366.3	false
13C8-PFOS	507.0 / 99.0	3.06	33945.60	319.869281	251.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:51:30 AM

Sample Name	J8381-FS(3)	**Injection Vial**	27
Sample ID	VC-PM64B-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:46:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	112048.89	298.796442	527.1	false
d3-MeFOSAA	573.0 / 419.0	3.58	16588.85	280.880447	221.9	false
d5-EtFOSAA	589.0 / 419.0	3.73	18010.13	297.697093	295.7	false
13C5-PFHxA	318.0 / 273.0	1.84	77580.70	298.767469	640.8	false
13C4-PFHpA	367.0 / 322.0	2.25	87328.87	299.192377	1082.3	false
13C8-PFOA	421.0 / 376.0	2.66	115970.83	326.105901	1935.5	false
13C9-PFNA	472.0 / 427.0	3.06	111218.31	312.145346	1360.2	false
13C6-PFDA	519.0 / 474.0	3.41	113727.17	303.834124	3261.3	false
13C7-PFUnA	570.0 / 525.0	3.74	114525.29	333.648522	687.6	false
13C2-PFTeDA	715.0 / 670.0	4.50	93596.94	312.245154	1977.6	false
13C3-PFBS	302.0 / 99.0	1.52	34244.69	267.213617	408.8	false
13C3-PFHxS	402.0 / 99.0	2.28	31340.00	269.908619	413.0	false
13C8-PFOS	507.0 / 99.0	3.06	30165.57	247.681037	223.8	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:51:34 AM

Sample Name	J8386-FS(3)	**Injection Vial**	28
Sample ID	VC-HS09-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:57:04	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	88349.69	284.677030	714.8	false
d3-MeFOSAA	573.0 / 419.0	3.58	13852.55	297.368752	191.7	false
d5-EtFOSAA	589.0 / 419.0	3.74	9494.35	198.968036	164.6	false
13C5-PFHxA	318.0 / 273.0	1.85	63297.78	298.226633	439.5	false
13C4-PFHpA	367.0 / 322.0	2.26	72410.53	303.509844	648.3	false
13C8-PFOA	421.0 / 376.0	2.67	86437.38	297.365011	948.3	false
13C9-PFNA	472.0 / 427.0	3.06	79030.15	271.363692	1016.8	false
13C6-PFDA	519.0 / 474.0	3.42	98074.94	316.599241	898.4	false
13C7-PFUnA	570.0 / 525.0	3.74	65942.32	232.130138	469.8	false
13C2-PFTeDA	715.0 / 670.0	4.50	77955.60	314.239568	2053.0	false
13C3-PFBS	302.0 / 99.0	1.52	29564.90	292.484003	401.1	false
13C3-PFHxS	402.0 / 99.0	2.28	27541.30	300.720152	247.5	false
13C8-PFOS	507.0 / 99.0	3.06	25903.02	269.644749	198.9	false

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Summary Quant Report

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Printed: 17/10/2018 11:51:39 AM

Sample Name	J8387-FS(3)	**Injection Vial**	29
Sample ID	VC-HS09-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:07:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	103454.48	291.541106	737.3	false
d3-MeFOSAA	573.0 / 419.0	3.58	14889.54	287.466526	180.7	false
d5-EtFOSAA	589.0 / 419.0	3.74	15316.62	288.683235	178.4	false
13C5-PFHxA	318.0 / 273.0	1.85	69538.93	284.113927	559.2	false
13C4-PFHpA	367.0 / 322.0	2.25	80864.08	293.922788	741.3	false
13C8-PFOA	421.0 / 376.0	2.66	101992.21	304.271883	3203.3	false
13C9-PFNA	472.0 / 427.0	3.06	97156.51	289.292667	1045.1	false
13C6-PFDA	519.0 / 474.0	3.42	104772.56	295.802956	881.0	false
13C7-PFUnA	570.0 / 525.0	3.74	94924.42	292.245884	585.2	false
13C2-PFTeDA	715.0 / 670.0	4.50	82960.37	292.474074	1995.5	false
13C3-PFBS	302.0 / 99.0	1.52	34123.30	303.610703	423.4	false
13C3-PFHxS	402.0 / 99.0	2.28	27172.49	266.838081	327.7	false
13C8-PFOS	507.0 / 99.0	3.06	32060.57	300.160287	260.8	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:51:44 AM

Sample Name	J8388-FS(3)	**Injection Vial**	30
Sample ID	VC-HS09-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:18:49	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	96506.14	300.162368	764.4	false
d3-MeFOSAA	573.0 / 419.0	3.57	15689.91	272.669290	176.9	false
d5-EtFOSAA	589.0 / 419.0	3.74	15760.71	267.389417	217.6	false
13C5-PFHxA	318.0 / 273.0	1.84	69386.56	317.839372	552.8	false
13C4-PFHpA	367.0 / 322.0	2.25	74785.40	304.763014	744.7	false
13C8-PFOA	421.0 / 376.0	2.66	94841.68	317.220963	1122.8	false
13C9-PFNA	472.0 / 427.0	3.05	86143.22	287.577181	857.1	false
13C6-PFDA	519.0 / 474.0	3.41	98747.49	307.703046	714.1	false
13C7-PFUnA	570.0 / 525.0	3.73	98380.66	334.295825	614.2	false
13C2-PFTeDA	715.0 / 670.0	4.49	76340.07	297.043459	1872.0	false
13C3-PFBS	302.0 / 99.0	1.52	27203.19	217.869156	365.8	false
13C3-PFHxS	402.0 / 99.0	2.27	26365.24	233.055856	300.7	false
13C8-PFOS	507.0 / 99.0	3.05	31686.51	267.033807	256.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:51:48 AM

Sample Name	J8389-FS(3)	**Injection Vial**	31
Sample ID	VC-HS09-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:29:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	105919.87	300.745376	742.2	false
d3-MeFOSAA	573.0 / 419.0	3.57	15292.33	286.563604	251.5	false
d5-EtFOSAA	589.0 / 419.0	3.73	14577.52	266.675820	172.1	false
13C5-PFHxA	318.0 / 273.0	1.84	75827.93	303.409416	783.0	false
13C4-PFHpA	367.0 / 322.0	2.25	84853.07	302.051142	630.6	false
13C8-PFOA	421.0 / 376.0	2.66	108472.83	316.921082	2949.9	false
13C9-PFNA	472.0 / 427.0	3.05	108165.67	315.420777	828.1	false
13C6-PFDA	519.0 / 474.0	3.41	113691.74	323.411062	773.1	false
13C7-PFUnA	570.0 / 525.0	3.73	107781.84	334.339017	721.0	false
13C2-PFTeDA	715.0 / 670.0	4.49	86714.50	308.020355	2353.7	false
13C3-PFBS	302.0 / 99.0	1.52	30542.39	263.760966	330.1	false
13C3-PFHxS	402.0 / 99.0	2.27	29387.36	280.104702	294.8	false
13C8-PFOS	507.0 / 99.0	3.05	34413.21	312.714861	267.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:51:53 AM

Sample Name	J8390-FS(3)	**Injection Vial**	32
Sample ID	VC-HS09-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:40:32	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	91430.78	286.732143	580.4	false
d3-MeFOSAA	573.0 / 419.0	3.58	14091.30	319.511272	223.5	false
d5-EtFOSAA	589.0 / 419.0	3.73	15648.77	346.392033	158.6	false
13C5-PFHxA	318.0 / 273.0	1.84	67871.54	321.033023	514.0	false
13C4-PFHpA	367.0 / 322.0	2.25	72182.82	303.744867	929.6	false
13C8-PFOA	421.0 / 376.0	2.66	94557.32	326.578398	1369.6	false
13C9-PFNA	472.0 / 427.0	3.05	94816.51	326.848865	859.6	false
13C6-PFDA	519.0 / 474.0	3.41	99418.04	312.358696	897.9	false
13C7-PFUnA	570.0 / 525.0	3.73	96931.85	332.101149	664.2	false
13C2-PFTeDA	715.0 / 670.0	4.49	77597.37	304.436780	1589.4	false
13C3-PFBS	302.0 / 99.0	1.52	27981.31	292.390573	437.0	false
13C3-PFHxS	402.0 / 99.0	2.28	24802.43	286.049929	281.8	false
13C8-PFOS	507.0 / 99.0	3.05	27048.36	297.407600	238.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:51:57 AM

Sample Name	J8391-FS(3)	**Injection Vial**	33
Sample ID	VC-HS09-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:51:23	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	102804.41	289.746041	898.4	false
d3-MeFOSAA	573.0 / 419.0	3.57	14464.34	288.985549	221.9	false
d5-EtFOSAA	589.0 / 419.0	3.73	17134.28	334.191796	213.3	false
13C5-PFHxA	318.0 / 273.0	1.84	70571.49	311.313455	432.0	false
13C4-PFHpA	367.0 / 322.0	2.25	86426.25	339.177758	1219.8	false
13C8-PFOA	421.0 / 376.0	2.66	100911.18	325.041041	1304.9	false
13C9-PFNA	472.0 / 427.0	3.05	108651.80	349.306387	1058.8	false
13C6-PFDA	519.0 / 474.0	3.41	113870.14	321.528965	902.8	false
13C7-PFUnA	570.0 / 525.0	3.73	107613.47	331.354108	865.1	false
13C2-PFTeDA	715.0 / 670.0	4.49	89169.47	314.404074	1887.0	false
13C3-PFBS	302.0 / 99.0	1.52	30229.27	278.333296	371.7	false
13C3-PFHxS	402.0 / 99.0	2.27	29432.16	299.096965	367.5	false
13C8-PFOS	507.0 / 99.0	3.05	32908.69	318.833560	235.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:52:02 AM

Sample Name	J8392-FS(3)	**Injection Vial**	34
Sample ID	VC-HS09-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:02:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	111353.91	302.409431	855.1	false
d3-MeFOSAA	573.0 / 419.0	3.57	17480.84	295.236806	212.9	false
d5-EtFOSAA	589.0 / 419.0	3.73	17300.94	285.253246	198.4	false
13C5-PFHxA	318.0 / 273.0	1.84	72389.20	273.254035	692.6	false
13C4-PFHpA	367.0 / 322.0	2.25	83745.26	281.232891	938.3	false
13C8-PFOA	421.0 / 376.0	2.66	107432.38	296.113557	1062.2	false
13C9-PFNA	472.0 / 427.0	3.06	97933.26	269.416398	817.4	false
13C6-PFDA	519.0 / 474.0	3.41	122535.65	333.393236	1040.3	false
13C7-PFUnA	570.0 / 525.0	3.73	108866.00	322.999671	861.8	false
13C2-PFTeDA	715.0 / 670.0	4.49	85437.29	290.270924	1299.8	false
13C3-PFBS	302.0 / 99.0	1.52	30057.53	233.949281	332.6	false
13C3-PFHxS	402.0 / 99.0	2.27	30885.07	265.319585	309.9	false
13C8-PFOS	507.0 / 99.0	3.05	32245.83	264.093577	249.2	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:52:06 AM

Sample Name	J8393MS-FS(3)	**Injection Vial**	37
Sample ID	VC-HS09-SB03-0506-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:34:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	108165.88	295.535524	782.8	false
d3-MeFOSAA	573.0 / 419.0	3.58	14964.15	294.427020	127.4	false
d5-EtFOSAA	589.0 / 419.0	3.73	15325.59	294.371298	171.6	false
13C5-PFHxA	318.0 / 273.0	1.84	72516.34	287.802479	717.2	false
13C4-PFHpA	367.0 / 322.0	2.25	81310.96	287.091842	634.7	false
13C8-PFOA	421.0 / 376.0	2.66	98585.08	285.693366	1854.2	false
13C9-PFNA	472.0 / 427.0	3.06	100178.98	289.758542	1166.3	false
13C6-PFDA	519.0 / 474.0	3.41	102379.61	280.244652	2035.9	false
13C7-PFUnA	570.0 / 525.0	3.73	100421.69	299.755298	738.1	false
13C2-PFTeDA	715.0 / 670.0	4.49	86982.79	297.316462	1350.2	false
13C3-PFBS	302.0 / 99.0	1.52	32242.26	292.355458	523.9	false
13C3-PFHxS	402.0 / 99.0	2.28	27526.46	275.479042	319.8	false
13C8-PFOS	507.0 / 99.0	3.06	32381.20	308.954592	270.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:52:11 AM

Sample Name	J8394MSD-FS(3)	**Injection Vial**	38
Sample ID	VC-HS09-SB03-0506-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:45:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	105123.52	307.869170	860.0	false
d3-MeFOSAA	573.0 / 419.0	3.57	14052.13	235.636309	113.2	false
d5-EtFOSAA	589.0 / 419.0	3.73	15991.40	261.781674	151.5	false
13C5-PFHxA	318.0 / 273.0	1.84	73245.09	316.003132	553.1	false
13C4-PFHpA	367.0 / 322.0	2.25	83938.92	322.173162	1001.9	false
13C8-PFOA	421.0 / 376.0	2.66	93281.27	293.858079	2591.9	false
13C9-PFNA	472.0 / 427.0	3.05	97610.58	306.909820	892.5	false
13C6-PFDA	519.0 / 474.0	3.41	102256.03	300.026538	810.8	false
13C7-PFUnA	570.0 / 525.0	3.73	95751.84	306.360920	535.5	false
13C2-PFTeDA	715.0 / 670.0	4.49	85800.30	314.355646	1860.8	false
13C3-PFBS	302.0 / 99.0	1.52	33033.54	255.279127	336.2	false
13C3-PFHxS	402.0 / 99.0	2.27	27930.96	238.231099	330.7	false
13C8-PFOS	507.0 / 99.0	3.05	29783.85	242.190420	215.9	false

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Summary Quant Report

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Sample Name	J8401-FS(3)	**Injection Vial**	39
Sample ID	VC-HS09-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:56:30	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.03	118041.60	289.686375	712.1	false
d3-MeFOSAA	573.0 / 419.0	3.58	15498.63	245.472257	202.5	false
d5-EtFOSAA	589.0 / 419.0	3.74	17815.59	275.462052	261.2	false
13C5-PFHxA	318.0 / 273.0	1.85	83754.73	307.019253	582.9	false
13C4-PFHpA	367.0 / 322.0	2.25	99001.95	322.859148	1099.7	false
13C8-PFOA	421.0 / 376.0	2.66	112610.05	301.414210	3056.6	false
13C9-PFNA	472.0 / 427.0	3.06	112536.05	300.641514	921.5	false
13C6-PFDA	519.0 / 474.0	3.41	128013.35	314.740542	1083.4	false
13C7-PFUnA	570.0 / 525.0	3.73	114445.24	306.839073	744.9	false
13C2-PFTeDA	715.0 / 670.0	4.49	101026.49	310.166161	2158.7	false
13C3-PFBS	302.0 / 99.0	1.52	36933.88	269.583937	587.7	false
13C3-PFHxS	402.0 / 99.0	2.28	34236.70	275.812135	328.7	false
13C8-PFOS	507.0 / 99.0	3.05	37494.05	287.970062	299.5	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:52:19 AM

Sample Name	J8402-FS(3)	**Injection Vial**	40
Sample ID	VC-HS09-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:07:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	103523.70	300.986453	717.7	false
d3-MeFOSAA	573.0 / 419.0	3.57	14180.88	271.703541	189.5	false
d5-EtFOSAA	589.0 / 419.0	3.73	13306.62	248.892710	157.9	false
13C5-PFHxA	318.0 / 273.0	1.84	72398.86	305.317268	544.2	false
13C4-PFHpA	367.0 / 322.0	2.25	82295.14	308.749954	774.7	false
13C8-PFOA	421.0 / 376.0	2.66	101487.71	312.509608	226.4	false
13C9-PFNA	472.0 / 427.0	3.05	96071.71	295.267822	36355.1	false
13C6-PFDA	519.0 / 474.0	3.41	107338.95	312.657587	1131.8	false
13C7-PFUnA	570.0 / 525.0	3.73	98054.54	311.454650	748.1	false
13C2-PFTeDA	715.0 / 670.0	4.49	79088.38	287.664348	1806.0	false
13C3-PFBS	302.0 / 99.0	1.52	29983.98	264.753266	401.2	false
13C3-PFHxS	402.0 / 99.0	2.27	29296.18	285.506101	292.3	false
13C8-PFOS	507.0 / 99.0	3.05	31003.11	288.053519	279.8	false

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Summary Quant Report

Sample Name	J8403-FS(3)	**Injection Vial**	41
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:18:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	121123.31	331.312356	585.9	false
d3-MeFOSAA	573.0 / 419.0	3.57	16856.28	357.002576	214.1	false
d5-EtFOSAA	589.0 / 419.0	3.73	21358.85	441.611232	189.1	false
13C5-PFHxA	318.0 / 273.0	1.84	85796.83	319.768952	617.4	false
13C4-PFHpA	367.0 / 322.0	2.25	94271.83	312.579201	932.5	false
13C8-PFOA	421.0 / 376.0	2.66	111200.88	302.624124	215.0	false
13C9-PFNA	472.0 / 427.0	3.05	101045.19	274.461649	1176.6	false
13C6-PFDA	519.0 / 474.0	3.41	126555.42	346.812795	1362.6	false
13C7-PFUnA	570.0 / 525.0	3.73	123269.25	368.370281	713.8	true
13C2-PFTeDA	715.0 / 670.0	4.49	96462.84	330.092872	1325.9	false
13C3-PFBS	302.0 / 99.0	1.52	37291.22	363.979013	456.8	false
13C3-PFHxS	402.0 / 99.0	2.27	32580.70	350.980058	286.9	true
13C8-PFOS	507.0 / 99.0	3.05	33239.76	341.384218	253.0	false

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Summary Quant Report

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Sample Name	J8403-FS-D(5)	**Injection Vial**	42
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:29:05	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	85493.48	277.079832	661.4	false
d3-MeFOSAA	573.0 / 419.0	3.57	12617.93	262.838484	173.0	false
d5-EtFOSAA	589.0 / 419.0	3.73	15474.58	314.682262	208.2	false
13C5-PFHxA	318.0 / 273.0	1.84	59703.93	248.601000	592.9	false
13C4-PFHpA	367.0 / 322.0	2.25	66730.74	247.194587	702.3	false
13C8-PFOA	421.0 / 376.0	2.66	85345.86	259.485269	1016.2	false
13C9-PFNA	472.0 / 427.0	3.05	85914.94	260.717175	878.7	false
13C6-PFDA	519.0 / 474.0	3.41	90226.13	292.960254	1091.1	false
13C7-PFUnA	570.0 / 525.0	3.73	87245.98	308.913797	635.3	false
13C2-PFTeDA	715.0 / 670.0	4.49	69836.75	283.153647	1955.5	false
13C3-PFBS	302.0 / 99.0	1.52	26268.25	252.169226	412.4	false
13C3-PFHxS	402.0 / 99.0	2.27	25567.93	270.899876	358.1	false
13C8-PFOS	507.0 / 99.0	3.05	25652.24	259.120676	249.7	false

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Summary Quant Report

Sample Name	J8404-FS(3)	**Injection Vial**	43
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:39:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	101611.48	286.158676	963.2	false
d3-MeFOSAA	573.0 / 419.0	3.57	11942.59	262.406964	200.5	false
d5-EtFOSAA	589.0 / 419.0	3.73	15468.92	331.809935	200.3	false
13C5-PFHxA	318.0 / 273.0	1.84	72344.19	295.605910	828.0	false
13C4-PFHpA	367.0 / 322.0	2.24	77086.40	280.220774	721.4	false
13C8-PFOA	421.0 / 376.0	2.65	88825.11	265.018105	1743.6	false
13C9-PFNA	472.0 / 427.0	3.05	93493.99	278.415985	1019.6	false
13C6-PFDA	519.0 / 474.0	3.41	103375.04	291.664988	935.7	false
13C7-PFUnA	570.0 / 525.0	3.73	96290.05	296.254885	753.6	false
13C2-PFTeDA	715.0 / 670.0	4.48	80595.83	283.950663	1417.8	false
13C3-PFBS	302.0 / 99.0	1.52	30686.90	310.734927	406.1	false
13C3-PFHxS	402.0 / 99.0	2.27	26397.76	295.023435	316.6	false
13C8-PFOS	507.0 / 99.0	3.05	26445.05	281.771653	267.0	false

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Summary Quant Report

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Sample Name	J8404-FS-D(5)	**Injection Vial**	44
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:50:48	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	105475.60	274.910062	1005.6	false
d3-MeFOSAA	573.0 / 419.0	3.57	13754.18	295.251395	180.6	false
d5-EtFOSAA	589.0 / 419.0	3.73	14215.90	297.909265	170.5	false
13C5-PFHxA	318.0 / 273.0	1.84	68197.95	271.504229	590.6	false
13C4-PFHpA	367.0 / 322.0	2.25	74944.93	265.436475	665.1	false
13C8-PFOA	421.0 / 376.0	2.66	88379.75	256.914316	1150.1	false
13C9-PFNA	472.0 / 427.0	3.05	86805.19	251.855778	962.8	false
13C6-PFDA	519.0 / 474.0	3.41	103318.97	269.788314	761.7	false
13C7-PFUnA	570.0 / 525.0	3.73	98393.35	280.171722	754.5	false
13C2-PFTeDA	715.0 / 670.0	4.49	79196.61	258.232816	1861.8	false
13C3-PFBS	302.0 / 99.0	1.52	29238.96	289.253893	413.7	false
13C3-PFHxS	402.0 / 99.0	2.27	25560.76	279.089441	253.6	false
13C8-PFOS	507.0 / 99.0	3.05	29667.35	308.824571	218.0	false

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Summary Quant Report

Sample Name	J8404-FS-D(7)	**Injection Vial**	45
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:01:40	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	83951.30	249.720008	946.7	false
d3-MeFOSAA	573.0 / 419.0	3.57	12505.63	230.842929	209.1	false
d5-EtFOSAA	589.0 / 419.0	3.73	14486.66	261.054890	176.2	false
13C5-PFHxA	318.0 / 273.0	1.84	63200.70	243.662461	859.4	false
13C4-PFHpA	367.0 / 322.0	2.25	67124.61	230.229824	622.9	false
13C8-PFOA	421.0 / 376.0	2.66	84751.83	238.586644	1216.4	false
13C9-PFNA	472.0 / 427.0	3.05	89539.94	251.584882	1187.0	false
13C6-PFDA	519.0 / 474.0	3.41	92819.02	276.609663	846.0	false
13C7-PFUnA	570.0 / 525.0	3.73	92436.04	300.391181	764.0	false
13C2-PFTeDA	715.0 / 670.0	4.49	70502.99	262.361197	1769.6	false
13C3-PFBS	302.0 / 99.0	1.52	26165.19	222.584594	533.6	false
13C3-PFHxS	402.0 / 99.0	2.27	26073.61	244.807511	315.3	false
13C8-PFOS	507.0 / 99.0	3.05	23981.15	214.662933	200.2	false

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Summary Quant Report

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Sample Name	J8405-FS(3)	**Injection Vial**	48
Sample ID	VC-AOC16-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:34:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	133425.56	322.433370	586.2	false
d3-MeFOSAA	573.0 / 419.0	3.56	19909.93	322.792889	218.8	false
d5-EtFOSAA	589.0 / 419.0	3.73	22273.13	352.523389	188.5	false
13C5-PFHxA	318.0 / 273.0	1.84	91521.67	299.449412	758.2	false
13C4-PFHpA	367.0 / 322.0	2.25	98160.59	285.726006	1045.1	false
13C8-PFOA	421.0 / 376.0	2.65	125172.18	299.045736	1107.3	false
13C9-PFNA	472.0 / 427.0	3.05	128895.59	307.353793	1174.7	false
13C6-PFDA	519.0 / 474.0	3.40	147346.85	356.735449	1018.9	false
13C7-PFUnA	570.0 / 525.0	3.72	137406.49	362.767302	1000.7	false
13C2-PFTeDA	715.0 / 670.0	4.48	103755.83	313.674799	1904.0	false
13C3-PFBS	302.0 / 99.0	1.52	38043.89	284.249093	386.1	false
13C3-PFHxS	402.0 / 99.0	2.27	35194.84	290.232178	436.1	false
13C8-PFOS	507.0 / 99.0	3.04	41107.29	323.183312	280.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 17/10/2018 11:52:48 AM

Sample Name	J8406-FS(3)	**Injection Vial**	49
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:45:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	112984.78	284.418603	699.0	false
d3-MeFOSAA	573.0 / 419.0	3.57	16457.77	443.461086	215.0	false
d5-EtFOSAA	589.0 / 419.0	3.73	18818.76	495.025975	197.1	false
13C5-PFHxA	318.0 / 273.0	1.84	83214.71	326.730713	582.4	false
13C4-PFHpA	367.0 / 322.0	2.24	87683.01	306.279821	755.5	false
13C8-PFOA	421.0 / 376.0	2.66	99213.25	284.439466	3009.5	false
13C9-PFNA	472.0 / 427.0	3.05	82976.72	237.436297	2084.8	false
13C6-PFDA	519.0 / 474.0	3.40	129095.24	325.576258	708.0	false
13C7-PFUnA	570.0 / 525.0	3.72	117414.96	322.909959	1063.8	false
13C2-PFTeDA	715.0 / 670.0	4.48	92287.17	290.633435	2026.6	false
13C3-PFBS	302.0 / 99.0	1.52	36616.66	454.698141	447.8	false
13C3-PFHxS	402.0 / 99.0	2.27	32604.92	446.868774	321.2	false
13C8-PFOS	507.0 / 99.0	3.04	26826.18	350.525138	196.2	false

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Summary Quant Report

Sample Name	J8406-FS-D(5)	**Injection Vial**	50
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:55:58	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	93599.50	233.823616	704.3	false
d3-MeFOSAA	573.0 / 419.0	3.57	14162.11	256.388968	185.8	false
d5-EtFOSAA	589.0 / 419.0	3.73	18654.08	329.683865	240.1	false
13C5-PFHxA	318.0 / 273.0	1.84	64494.64	240.573613	839.2	false
13C4-PFHpA	367.0 / 322.0	2.25	69541.00	230.769484	563.2	false
13C8-PFOA	421.0 / 376.0	2.65	92476.49	251.875524	193.6	false
13C9-PFNA	472.0 / 427.0	3.05	86943.06	236.352538	994.9	false
13C6-PFDA	519.0 / 474.0	3.40	96775.23	242.205206	824.7	false
13C7-PFUnA	570.0 / 525.0	3.72	96707.48	263.933695	746.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	74677.06	233.382469	1706.4	false
13C3-PFBS	302.0 / 99.0	1.52	27031.50	225.528577	343.4	false
13C3-PFHxS	402.0 / 99.0	2.27	25017.34	230.369488	377.8	false
13C8-PFOS	507.0 / 99.0	3.04	29715.48	260.873510	225.0	false

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Summary Quant Report

Sample Name	J8407-FS(3)	**Injection Vial**	51
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:06:50	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	104772.32	307.695720	1153.8	false
d3-MeFOSAA	573.0 / 419.0	3.56	14010.29	350.396948	184.2	false
d5-EtFOSAA	589.0 / 419.0	3.72	14926.13	364.428842	185.0	false
13C5-PFHxA	318.0 / 273.0	1.83	72448.80	316.960586	564.7	false
13C4-PFHpA	367.0 / 322.0	2.24	81379.30	316.738690	940.2	false
13C8-PFOA	421.0 / 376.0	2.65	88726.02	283.436218	210.0	false
13C9-PFNA	472.0 / 427.0	3.04	86173.83	274.758058	1059.8	false
13C6-PFDA	519.0 / 474.0	3.40	112753.78	331.749639	917.3	false
13C7-PFUnA	570.0 / 525.0	3.72	96618.88	309.996553	739.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	81870.96	300.795268	1391.3	false
13C3-PFBS	302.0 / 99.0	1.51	29989.74	345.657391	384.3	false
13C3-PFHxS	402.0 / 99.0	2.26	29969.35	381.243828	316.8	false
13C8-PFOS	507.0 / 99.0	3.04	26777.72	324.760003	259.7	false

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Summary Quant Report

Sample Name	J8407-FS-D(5)	**Injection Vial**	52
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:17:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	86834.85	254.494406	812.6	false
d3-MeFOSAA	573.0 / 419.0	3.56	13851.02	314.809743	154.5	false
d5-EtFOSAA	589.0 / 419.0	3.72	14410.46	319.739968	171.7	false
13C5-PFHxA	318.0 / 273.0	1.84	63868.31	284.728311	816.1	false
13C4-PFHpA	367.0 / 322.0	2.25	72476.23	287.444425	705.6	false
13C8-PFOA	421.0 / 376.0	2.66	82506.26	268.573048	2214.2	false
13C9-PFNA	472.0 / 427.0	3.05	83800.14	272.264458	1041.5	false
13C6-PFDA	519.0 / 474.0	3.40	97989.40	287.718468	1438.1	false
13C7-PFUnA	570.0 / 525.0	3.72	96237.79	308.141198	815.0	false
13C2-PFTeDA	715.0 / 670.0	4.48	72439.31	265.597919	1261.7	false
13C3-PFBS	302.0 / 99.0	1.52	27037.23	283.197034	353.6	false
13C3-PFHxS	402.0 / 99.0	2.27	27630.53	319.424412	349.0	false
13C8-PFOS	507.0 / 99.0	3.04	24471.71	269.716008	195.4	false

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Summary Quant Report

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Sample Name	J8407-FS-D(7)	**Injection Vial**	53
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:28:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	98323.15	262.430197	1009.7	false
d3-MeFOSAA	573.0 / 419.0	3.56	13492.62	250.480932	199.3	false
d5-EtFOSAA	589.0 / 419.0	3.72	15544.40	281.711674	167.3	false
13C5-PFHxA	318.0 / 273.0	1.84	64844.87	237.941078	717.7	false
13C4-PFHpA	367.0 / 322.0	2.24	66382.84	216.701876	574.5	false
13C8-PFOA	421.0 / 376.0	2.65	91945.16	246.350201	1753.2	false
13C9-PFNA	472.0 / 427.0	3.04	90601.81	242.287854	659.0	false
13C6-PFDA	519.0 / 474.0	3.40	99497.68	266.057437	1059.2	false
13C7-PFUnA	570.0 / 525.0	3.72	97843.42	285.305114	915.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	74075.22	247.341573	1304.0	false
13C3-PFBS	302.0 / 99.0	1.52	28471.90	243.587513	425.7	false
13C3-PFHxS	402.0 / 99.0	2.27	26578.57	250.970406	336.8	false
13C8-PFOS	507.0 / 99.0	3.04	30636.89	275.803043	245.0	false

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Summary Quant Report

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Printed: 17/10/2018 11:53:07 AM

Sample Name	J8408-FS(3)	**Injection Vial**	54
Sample ID	VC-AOC16-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:39:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	97159.50	285.157222	896.7	false
d3-MeFOSAA	573.0 / 419.0	3.56	13148.05	263.223142	174.8	false
d5-EtFOSAA	589.0 / 419.0	3.72	14492.91	283.250576	179.7	false
13C5-PFHxA	318.0 / 273.0	1.83	66944.01	286.686038	750.4	false
13C4-PFHpA	367.0 / 322.0	2.24	75530.79	287.760988	1023.4	false
13C8-PFOA	421.0 / 376.0	2.65	92814.80	290.230032	1460.9	false
13C9-PFNA	472.0 / 427.0	3.04	92966.29	290.149136	1548.7	false
13C6-PFDA	519.0 / 474.0	3.40	98747.19	290.354331	2297.9	false
13C7-PFUnA	570.0 / 525.0	3.72	103858.76	333.013762	839.2	false
13C2-PFTeDA	715.0 / 670.0	4.47	77920.35	286.098888	1395.8	false
13C3-PFBS	302.0 / 99.0	1.51	29074.99	268.251629	363.8	false
13C3-PFHxS	402.0 / 99.0	2.26	24680.73	251.323506	292.4	false
13C8-PFOS	507.0 / 99.0	3.04	29268.13	284.140779	285.9	false

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Summary Quant Report

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Sample Name	J8409-FS(3)	**Injection Vial**	1
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:50:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	119593.56	310.200764	803.4	false
d3-MeFOSAA	573.0 / 419.0	3.56	13783.03	320.686622	190.9	false
d5-EtFOSAA	589.0 / 419.0	3.72	17947.15	407.647015	192.7	false
13C5-PFHxA	318.0 / 273.0	1.83	78544.14	335.574212	672.3	false
13C4-PFHpA	367.0 / 322.0	2.24	85747.90	325.920255	771.4	false
13C8-PFOA	421.0 / 376.0	2.65	101271.26	315.930301	1074.9	false
13C9-PFNA	472.0 / 427.0	3.05	84857.90	264.221450	888.7	false
13C6-PFDA	519.0 / 474.0	3.40	116808.08	303.537531	630.5	false
13C7-PFUnA	570.0 / 525.0	3.72	109414.98	310.050039	622.4	false
13C2-PFTeDA	715.0 / 670.0	4.48	90217.02	292.745165	1298.7	false
13C3-PFBS	302.0 / 99.0	1.51	33923.80	363.748160	386.2	false
13C3-PFHxS	402.0 / 99.0	2.27	28550.30	337.877546	256.2	false
13C8-PFOS	507.0 / 99.0	3.04	24961.59	281.633560	211.5	false

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Summary Quant Report

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Printed: 17/10/2018 11:53:16 AM

Sample Name	J8409-FS-D(5)	**Injection Vial**	2
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:01:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	89144.06	265.444595	1067.1	false
d3-MeFOSAA	573.0 / 419.0	3.56	14529.96	290.473025	210.6	false
d5-EtFOSAA	589.0 / 419.0	3.72	16223.43	316.618679	199.0	false
13C5-PFHxA	318.0 / 273.0	1.83	64366.10	263.544263	665.9	false
13C4-PFHpA	367.0 / 322.0	2.24	66066.82	240.653885	617.0	false
13C8-PFOA	421.0 / 376.0	2.65	87617.26	261.948756	1146.4	false
13C9-PFNA	472.0 / 427.0	3.04	88417.63	263.837328	654.6	false
13C6-PFDA	519.0 / 474.0	3.39	95009.16	283.433635	139486.5	false
13C7-PFUnA	570.0 / 525.0	3.72	91697.89	298.305131	836.1	false
13C2-PFTeDA	715.0 / 670.0	4.47	72762.24	271.052685	2590.6	false
13C3-PFBS	302.0 / 99.0	1.51	26413.75	243.350113	494.5	false
13C3-PFHxS	402.0 / 99.0	2.26	24340.92	247.508891	244.8	false
13C8-PFOS	507.0 / 99.0	3.04	30005.25	290.880554	229.7	false

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Summary Quant Report

Sample Name	J8410-FS(3)	**Injection Vial**	5
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:33:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	94808.42	278.682500	787.2	false
d3-MeFOSAA	573.0 / 419.0	3.56	14521.13	371.971472	255.9	false
d5-EtFOSAA	589.0 / 419.0	3.73	16381.69	409.657077	285.0	false
13C5-PFHxA	318.0 / 273.0	1.84	66000.98	296.566785	950.2	false
13C4-PFHpA	367.0 / 322.0	2.25	70152.38	280.432013	504.9	false
13C8-PFOA	421.0 / 376.0	2.66	92634.45	303.930957	2899.0	false
13C9-PFNA	472.0 / 427.0	3.05	77728.31	254.537818	1103.2	false
13C6-PFDA	519.0 / 474.0	3.40	107898.11	317.746734	841.6	false
13C7-PFUnA	570.0 / 525.0	3.72	100336.61	322.212333	659.6	false
13C2-PFTeDA	715.0 / 670.0	4.48	74765.80	274.936222	1916.7	false
13C3-PFBS	302.0 / 99.0	1.51	30055.18	354.804032	376.9	false
13C3-PFHxS	402.0 / 99.0	2.27	23399.60	304.880793	394.7	false
13C8-PFOS	507.0 / 99.0	3.04	23375.43	290.365237	237.8	false

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Summary Quant Report

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Sample Name	J8410-FS-D(5)	**Injection Vial**	6
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:44:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	86376.96	252.103852	786.5	false
d3-MeFOSAA	573.0 / 419.0	3.57	14023.42	279.257362	231.2	false
d5-EtFOSAA	589.0 / 419.0	3.73	14111.60	274.333832	209.0	false
13C5-PFHxA	318.0 / 273.0	1.84	63781.65	271.101539	592.6	false
13C4-PFHpA	367.0 / 322.0	2.25	66562.38	251.697072	1242.6	false
13C8-PFOA	421.0 / 376.0	2.66	91521.77	284.047477	3307.0	false
13C9-PFNA	472.0 / 427.0	3.05	85351.60	264.392352	812.2	false
13C6-PFDA	519.0 / 474.0	3.41	95682.68	279.781718	811.9	false
13C7-PFUnA	570.0 / 525.0	3.73	90655.16	289.064013	978.9	false
13C2-PFTeDA	715.0 / 670.0	4.48	72011.02	262.933966	1730.1	false
13C3-PFBS	302.0 / 99.0	1.52	24956.59	229.031797	349.6	false
13C3-PFHxS	402.0 / 99.0	2.27	25414.39	257.420278	335.7	false
13C8-PFOS	507.0 / 99.0	3.05	26287.07	253.845041	231.0	false

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Summary Quant Report

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Sample Name	J8411-FS(3)	**Injection Vial**	7
Sample ID	VC-AOC16-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:55:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	105067.43	274.082658	853.2	false
d3-MeFOSAA	573.0 / 419.0	3.56	13425.36	233.137372	164.6	false
d5-EtFOSAA	589.0 / 419.0	3.72	15699.02	266.140565	219.5	false
13C5-PFHxA	318.0 / 273.0	1.83	74825.46	271.310485	587.8	false
13C4-PFHpA	367.0 / 322.0	2.24	80328.06	259.117969	584.2	false
13C8-PFOA	421.0 / 376.0	2.65	98723.89	261.378434	2833.9	false
13C9-PFNA	472.0 / 427.0	3.04	103240.76	272.815710	1209.7	false
13C6-PFDA	519.0 / 474.0	3.40	111158.40	290.509391	905.2	false
13C7-PFUnA	570.0 / 525.0	3.72	107239.40	305.624211	622.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	82825.50	270.298540	1731.1	false
13C3-PFBS	302.0 / 99.0	1.51	33771.59	270.269881	369.6	false
13C3-PFHxS	402.0 / 99.0	2.27	32238.04	284.752227	481.9	false
13C8-PFOS	507.0 / 99.0	3.04	34512.53	290.628902	228.7	false

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Summary Ion Ratio Report

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:41:02	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.460	0.302	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.30	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.69	PFOA			
PFOA_2	413.0 / 169.0	2.69	PFOA	0.070	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.09	PFNA	0.190	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.09	PFOS	0.230	0.185	ü
PFDA_1	513.0 / 469.0	3.44	PFDA			
PFDA_2	513.0 / 219.0	3.45	PFDA	0.080	0.041	
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	4.05	PFDoA			
PFDoA_2	613.0 / 319.0	4.05	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.30	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	
PFTeDA_1	713.0 / 669.0	4.52	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.53	PFTeDA	0.100	0.048	
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.60	NMeFOSAA	1.150	0.575	
NEtFOSAA_1	584.0 / 419.0	3.76	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	

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Summary Ion Ratio Report

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Sample Name	CR894PB-FS(3)	**Injection Vial**	25
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:24:29	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.058	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	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	CR895LCS-FS(3)	**Injection Vial**	26
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:35:21	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.180	0.185	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	3.76	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.04	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.29	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.29	PFTrDA	0.060	0.066	ü
PFTeDA_1	713.0 / 669.0	4.51	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.50	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.59	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.59	NMeFOSAA	0.500	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.75	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.75	NEtFOSAA	0.070	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8381-FS(3)	**Injection Vial**	27
Sample ID	VC-PM64B-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:46:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.410	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.030	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.060	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.170	0.306	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.180	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8386-FS(3)	**Injection Vial**	28
Sample ID	VC-HS09-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:57:04	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.23	PFHpA	0.030	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.68	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.070	0.058	ü
PFNA_1	463.0 / 419.0	3.08	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.440	0.306	ü
PFOS_1	499.0 / 80.0	3.08	PFOS			
PFOS_2	499.0 / 99.0	3.08	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.020	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.210	0.074	

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Summary Ion Ratio Report

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Sample Name	J8387-FS(3)	**Injection Vial**	29
Sample ID	VC-HS09-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:07:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.65	PFOA	0.080	0.058	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	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.180	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8388-FS(3)	**Injection Vial**	30
Sample ID	VC-HS09-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:18:49	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.230	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.56	PFOA	0.070	0.058	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	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.110	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

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Sample Name	J8389-FS(3)	**Injection Vial**	31
Sample ID	VC-HS09-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:29:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.00	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.050	0.058	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	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8390-FS(3)	**Injection Vial**	32
Sample ID	VC-HS09-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:40:32	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.160	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.080	0.058	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.390	0.306	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.170	0.185	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.17	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8391-FS(3)	**Injection Vial**	33
Sample ID	VC-HS09-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:51:23	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.180	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.080	0.058	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	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8392-FS(3)	**Injection Vial**	34
Sample ID	VC-HS09-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:02:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.30	PFHxS	0.170	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	2.56	PFOA	N/A	0.058	
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	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8393MS-FS(3)	**Injection Vial**	37
Sample ID	VC-HS09-SB03-0506-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:34:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.27	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.060	0.058	ü
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	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.158	ü
PFTrDA_1	663.0 / 619.0	4.28	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.28	PFTrDA	0.070	0.066	ü
PFTeDA_1	713.0 / 669.0	4.50	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.550	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.060	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8394MSD-FS(3)	**Injection Vial**	38
Sample ID	VC-HS09-SB03-0506-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:45:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.080	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.060	0.058	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	0.185	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	3.75	PFUnA	0.050	0.054	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.150	0.158	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	0.048	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.530	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.060	0.074	ü

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Summary Ion Ratio Report

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Sample Name	J8401-FS(3)	**Injection Vial**	39
Sample ID	VC-HS09-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:56:30	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.310	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.060	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.29	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.050	0.058	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.270	0.306	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.43	PFDA	0.050	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	

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Summary Ion Ratio Report

Sample Name	J8402-FS(3)	**Injection Vial**	40
Sample ID	VC-HS09-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:07:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.190	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.040	0.058	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	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.170	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	

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Summary Ion Ratio Report

Sample Name	J8403-FS(3)	**Injection Vial**	41
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:18:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.360	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.67	PFOA	0.070	0.058	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	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.185	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.29	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

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Sample Name	J8403-FS-D(5)	**Injection Vial**	42
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:29:05	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.058	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	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.170	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8404-FS(3)	**Injection Vial**	43
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:39:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.310	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.080	0.058	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.340	0.306	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.140	0.185	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.060	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8404-FS-D(5)	**Injection Vial**	44
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:50:48	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.270	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.050	0.058	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	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.170	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8404-FS-D(7)	**Injection Vial**	45
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:01:40	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.058	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	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8405-FS(3)	**Injection Vial**	48
Sample ID	VC-AOC16-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:34:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.320	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.060	0.072	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.23	PFHpA	0.030	0.020	
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.57	PFOA	0.050	0.058	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	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.170	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8406-FS(3)	**Injection Vial**	49
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:45:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.53	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.060	0.072	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.67	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.080	0.058	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.310	0.306	ü
PFOS_1	499.0 / 80.0	3.03	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.170	0.185	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	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8406-FS-D(5)	**Injection Vial**	50
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:55:58	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.058	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	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8407-FS(3)	**Injection Vial**	51
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:06:50	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.53	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.060	0.072	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.27	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.070	0.058	ü
PFNA_1	463.0 / 419.0	3.05	PFNA			
PFNA_2	463.0 / 219.0	3.05	PFNA	0.340	0.306	ü
PFOS_1	499.0 / 80.0	3.00	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.160	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

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Sample Name	J8407-FS-D(5)	**Injection Vial**	52
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:17:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.058	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	3.02	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.120	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8407-FS-D(7)	**Injection Vial**	53
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:28:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.058	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	3.02	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.120	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8408-FS(3)	**Injection Vial**	54
Sample ID	VC-AOC16-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:39:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.320	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.060	0.072	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.24	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.27	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.65	PFOA			
PFOA_2	413.0 / 169.0	2.55	PFOA	0.120	0.058	
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.306	ü
PFOS_1	499.0 / 80.0	3.04	PFOS			
PFOS_2	499.0 / 99.0	3.05	PFOS	0.180	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8409-FS(3)	**Injection Vial**	1
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:50:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.53	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.072	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.65	PFOA	0.050	0.058	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.320	0.306	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.210	0.185	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8409-FS-D(5)	**Injection Vial**	2
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:01:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.058	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	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.05	PFOS	0.180	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8410-FS(3)	**Injection Vial**	5
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:33:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.280	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.060	0.072	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.030	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.65	PFOA	0.080	0.058	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.340	0.306	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.185	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.40	PFDA	0.040	0.041	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8410-FS-D(5)	**Injection Vial**	6
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:44:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.072	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.020	ü
PFHxS_1	399.0 / 80.0	N/A	PFHxS			
PFHxS_2	399.0 / 99.0	N/A	PFHxS	N/A	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.058	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	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

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Summary Ion Ratio Report

Sample Name	J8411-FS(3)	**Injection Vial**	7
Sample ID	VC-AOC16-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:55:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.53	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.060	0.072	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.030	0.020	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.65	PFOA	0.050	0.058	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	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.185	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	0.054	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.158	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.066	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.048	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.575	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.074	ü

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:41:02	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	24552.93	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	24552.93	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	54750.90	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	54750.90	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	61985.92	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	61985.92	250.00
PFHxS_1	399.0 / 80.0	2.30	13C3-PFHxS	402.0 / 99.0	23029.74	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	23029.74	236.50
PFOA_1	413.0 / 369.0	2.69	13C8-PFOA	421.0 / 376.0	85450.51	250.00
PFOA_2	413.0 / 169.0	2.69	13C8-PFOA	421.0 / 376.0	85450.51	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	78595.95	250.00
PFNA_2	463.0 / 219.0	3.09	13C9-PFNA	472.0 / 427.0	78595.95	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	25607.23	239.25
PFOS_2	499.0 / 99.0	3.09	13C8-PFOS	507.0 / 99.0	25607.23	239.25
PFDA_1	513.0 / 469.0	3.44	13C6-PFDA	519.0 / 474.0	85705.91	250.00
PFDA_2	513.0 / 219.0	3.45	13C6-PFDA	519.0 / 474.0	85705.91	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	69477.27	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	69477.27	250.00
PFDoA_1	613.0 / 569.0	4.05	13C2-PFDoA	615.0 / 570.0	80124.04	250.00
PFDoA_2	613.0 / 319.0	4.05	13C2-PFDoA	615.0 / 570.0	80124.04	250.00
PFTrDA_1	663.0 / 619.0	4.30	13C2-PFTeDA	715.0 / 670.0	64277.73	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	64277.73	250.00
PFTeDA_1	713.0 / 669.0	4.52	13C2-PFTeDA	715.0 / 670.0	64277.73	250.00
PFTeDA_2	713.0 / 169.0	4.53	13C2-PFTeDA	715.0 / 670.0	64277.73	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	12010.64	250.00
NMeFOSAA_2	570.0 / 512.0	3.60	d3-MeFOSAA	573.0 / 419.0	12010.64	250.00
NEtFOSAA_1	584.0 / 419.0	3.76	d5-EtFOSAA	589.0 / 419.0	12812.20	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	12812.20	250.00

Sample Name	CR894PB-FS(3)	**Injection Vial**	25
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:24:29	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	29357.18	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	29357.18	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	70832.52	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	70832.52	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	79280.14	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	79280.14	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	25543.53	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	25543.53	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	97466.33	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	97466.33	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	92749.46	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	92749.46	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	30658.57	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	30658.57	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	106501.37	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	106501.37	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	98204.41	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	98204.41	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	101549.32	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	101549.32	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	79679.79	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	79679.79	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	79679.79	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	79679.79	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13746.07	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13746.07	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16381.92	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16381.92	250.00

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Summary Internal Standard Report

Sample Name	CR895LCS-FS(3)	**Injection Vial**	26
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:35:21	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	29544.43	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	29544.43	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	80961.83	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	80961.83	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	86853.33	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	86853.33	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	30892.66	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	30892.66	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	105384.06	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	105384.06	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	103865.11	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	103865.11	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	35261.67	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	35261.67	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	114150.89	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	114150.89	250.00
PFUnA_1	563.0 / 519.0	3.76	13C7-PFUnA	570.0 / 525.0	103034.76	250.00
PFUnA_2	563.0 / 269.0	3.76	13C7-PFUnA	570.0 / 525.0	103034.76	250.00
PFDoA_1	613.0 / 569.0	4.04	13C2-PFDoA	615.0 / 570.0	117692.48	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	117692.48	250.00
PFTrDA_1	663.0 / 619.0	4.29	13C2-PFTeDA	715.0 / 670.0	92318.86	250.00
PFTrDA_2	663.0 / 169.0	4.29	13C2-PFTeDA	715.0 / 670.0	92318.86	250.00
PFTeDA_1	713.0 / 669.0	4.51	13C2-PFTeDA	715.0 / 670.0	92318.86	250.00
PFTeDA_2	713.0 / 169.0	4.50	13C2-PFTeDA	715.0 / 670.0	92318.86	250.00
NMeFOSAA_1	570.0 / 419.0	3.59	d3-MeFOSAA	573.0 / 419.0	15602.50	250.00
NMeFOSAA_2	570.0 / 512.0	3.59	d3-MeFOSAA	573.0 / 419.0	15602.50	250.00
NEtFOSAA_1	584.0 / 419.0	3.75	d5-EtFOSAA	589.0 / 419.0	15602.19	250.00
NEtFOSAA_2	584.0 / 483.0	3.75	d5-EtFOSAA	589.0 / 419.0	15602.19	250.00

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Summary Internal Standard Report

Sample Name	J8381-FS(3)	**Injection Vial**	27
Sample ID	VC-PM64B-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:46:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	34244.69	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	34244.69	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	77580.70	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	77580.70	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	87328.87	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	87328.87	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	30743.47	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	30743.47	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	115970.83	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	115970.83	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	111218.31	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	111218.31	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	31050.13	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	31050.13	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	113727.17	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	113727.17	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	114525.29	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	114525.29	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	112048.89	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	112048.89	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	93596.94	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	93596.94	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	93596.94	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	93596.94	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16542.11	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16542.11	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18310.17	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18310.17	250.00

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Summary Internal Standard Report

Sample Name	J8386-FS(3)	**Injection Vial**	28
Sample ID	VC-HS09-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:57:04	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	29564.90	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	29564.90	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	63297.78	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	63297.78	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	72410.53	250.00
PFHpA_2	363.0 / 169.0	2.23	13C4-PFHpA	367.0 / 322.0	72410.53	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	27162.34	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	27162.34	236.50
PFOA_1	413.0 / 369.0	2.68	13C8-PFOA	421.0 / 376.0	86437.38	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	86437.38	250.00
PFNA_1	463.0 / 419.0	3.08	13C9-PFNA	472.0 / 427.0	79030.15	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	79030.15	250.00
PFOS_1	499.0 / 80.0	3.08	13C8-PFOS	507.0 / 99.0	26819.05	239.25
PFOS_2	499.0 / 99.0	3.08	13C8-PFOS	507.0 / 99.0	26819.05	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	98074.94	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	98074.94	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	65942.32	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	65942.32	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	88349.69	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	88349.69	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	77955.60	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	77955.60	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	77955.60	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	77955.60	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14189.89	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14189.89	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	9620.71	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	9620.71	250.00

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Summary Internal Standard Report

Sample Name	J8387-FS(3)	**Injection Vial**	29
Sample ID	VC-HS09-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:07:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	34123.30	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	34123.30	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	69538.93	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	69538.93	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	80864.08	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	80864.08	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	27408.58	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	27408.58	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	101992.21	250.00
PFOA_2	413.0 / 169.0	2.65	13C8-PFOA	421.0 / 376.0	101992.21	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	97156.51	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	97156.51	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	32493.43	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	32493.43	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	104772.56	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	104772.56	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	94924.42	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	94924.42	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	103454.48	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	103454.48	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	82960.37	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	82960.37	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	82960.37	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	82960.37	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15041.06	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15041.06	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15469.42	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15469.42	250.00

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Summary Internal Standard Report

Sample Name	J8388-FS(3)	**Injection Vial**	30
Sample ID	VC-HS09-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:18:49	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	27203.19	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	27203.19	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	69386.56	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	69386.56	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	74785.40	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	74785.40	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	26327.38	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	26327.38	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	94841.68	250.00
PFOA_2	413.0 / 169.0	2.56	13C8-PFOA	421.0 / 376.0	94841.68	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	86143.22	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	86143.22	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	29992.69	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	29992.69	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	98747.49	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	98747.49	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	98380.66	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	98380.66	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	96506.14	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	96506.14	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	76340.07	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76340.07	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	76340.07	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76340.07	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16024.29	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16024.29	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15425.68	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15425.68	250.00

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Summary Internal Standard Report

Sample Name	J8389-FS(3)	**Injection Vial**	31
Sample ID	VC-HS09-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:29:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	30542.39	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	30542.39	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	75827.93	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	75827.93	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	84853.07	250.00
PFHpA_2	363.0 / 169.0	2.00	13C4-PFHpA	367.0 / 322.0	84853.07	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	27741.50	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	27741.50	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	108472.83	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	108472.83	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	108165.67	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	108165.67	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	35205.36	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	35205.36	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	113691.74	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	113691.74	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	107781.84	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	107781.84	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	105919.87	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	105919.87	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	86714.50	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	86714.50	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	86714.50	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	86714.50	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15366.28	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15366.28	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14770.50	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14770.50	250.00

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Summary Internal Standard Report

Sample Name	J8390-FS(3)	**Injection Vial**	32
Sample ID	VC-HS09-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:40:32	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	27981.31	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	27981.31	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	67871.54	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	67871.54	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	72182.82	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	72182.82	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	24523.82	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	24523.82	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	94557.32	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	94557.32	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	94816.51	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	94816.51	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	27698.63	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	27698.63	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	99418.04	250.00
PFDA_2	513.0 / 219.0	3.17	13C6-PFDA	519.0 / 474.0	99418.04	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	96931.85	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96931.85	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	91430.78	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	91430.78	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	77597.37	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	77597.37	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	77597.37	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	77597.37	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15359.76	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15359.76	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15961.22	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15961.22	250.00

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Summary Internal Standard Report

Sample Name	J8391-FS(3)	**Injection Vial**	33
Sample ID	VC-HS09-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:51:23	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	30229.27	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	30229.27	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	70571.49	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	70571.49	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	86426.25	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	86426.25	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	28968.56	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	28968.56	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	100911.18	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	100911.18	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	108651.80	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	108651.80	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	33437.03	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	33437.03	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	113870.14	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	113870.14	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	107613.47	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	107613.47	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	102804.41	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	102804.41	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	89169.47	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	89169.47	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	89169.47	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	89169.47	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14991.55	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14991.55	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16863.52	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16863.52	250.00

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Summary Internal Standard Report

Sample Name	J8392-FS(3)	**Injection Vial**	34
Sample ID	VC-HS09-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:02:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	30057.53	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	30057.53	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	72389.20	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	72389.20	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	83745.26	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	83745.26	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	30113.73	236.50
PFHxS_2	399.0 / 99.0	2.30	13C3-PFHxS	402.0 / 99.0	30113.73	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	107432.38	250.00
PFOA_2	413.0 / 169.0	2.56	13C8-PFOA	421.0 / 376.0	107432.38	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	97933.26	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	97933.26	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	33037.65	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	33037.65	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	122535.65	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	122535.65	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	108866.00	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	108866.00	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	111353.91	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	111353.91	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	85437.29	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	85437.29	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	85437.29	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	85437.29	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	17337.94	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	17337.94	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17769.57	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17769.57	250.00

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Summary Internal Standard Report

Sample Name	J8393MS-FS(3)	**Injection Vial**	37
Sample ID	VC-HS09-SB03-0506-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:34:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	32242.26	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	32242.26	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	72516.34	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	72516.34	250.00
PFHpA_1	363.0 / 319.0	2.27	13C4-PFHpA	367.0 / 322.0	81310.96	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	81310.96	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	27454.53	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	27454.53	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	98585.08	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	98585.08	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	100178.98	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	100178.98	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	32436.13	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	32436.13	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	102379.61	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	102379.61	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	100421.69	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	100421.69	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	108165.88	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	108165.88	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	86982.79	250.00
PFTrDA_2	663.0 / 169.0	4.28	13C2-PFTeDA	715.0 / 670.0	86982.79	250.00
PFTeDA_1	713.0 / 669.0	4.50	13C2-PFTeDA	715.0 / 670.0	86982.79	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	86982.79	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	14997.19	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	14997.19	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	15849.99	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	15849.99	250.00

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Summary Internal Standard Report

Sample Name	J8394MSD-FS(3)	**Injection Vial**	38
Sample ID	VC-HS09-SB03-0506-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:45:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	33033.54	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	33033.54	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	73245.09	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	73245.09	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	83938.92	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	83938.92	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	26891.45	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	26891.45	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	93281.27	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	93281.27	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	97610.58	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	97610.58	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	30438.18	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	30438.18	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	102256.03	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	102256.03	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	95751.84	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	95751.84	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	105123.52	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	105123.52	250.00
PFTrDA_1	663.0 / 619.0	4.28	13C2-PFTeDA	715.0 / 670.0	85800.30	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	85800.30	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	85800.30	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	85800.30	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	14091.32	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	14091.32	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	15773.19	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	15773.19	250.00

Sample Name	J8401-FS(3)	**Injection Vial**	39
Sample ID	VC-HS09-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:56:30	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	36933.88	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	36933.88	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	83754.73	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	83754.73	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	99001.95	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	99001.95	250.00
PFHxS_1	399.0 / 80.0	2.29	13C3-PFHxS	402.0 / 99.0	33801.64	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	33801.64	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	112610.05	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	112610.05	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	112536.05	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	112536.05	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	37222.48	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	37222.48	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	128013.35	250.00
PFDA_2	513.0 / 219.0	3.43	13C6-PFDA	519.0 / 474.0	128013.35	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	114445.24	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	114445.24	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	118041.60	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	118041.60	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	101026.49	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	101026.49	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	101026.49	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	101026.49	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15725.43	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15725.43	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	18025.00	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18025.00	250.00

Sample Name	J8402-FS(3)	**Injection Vial**	40
Sample ID	VC-HS09-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:07:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	29983.98	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	29983.98	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	72398.86	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	72398.86	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	82295.14	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	82295.14	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	28904.41	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	28904.41	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	101487.71	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	101487.71	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	96071.71	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	96071.71	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	31569.39	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	31569.39	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	107338.95	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	107338.95	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	98054.54	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	98054.54	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	103523.70	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	103523.70	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	79088.38	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	79088.38	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	79088.38	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	79088.38	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14356.24	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14356.24	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	13237.45	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	13237.45	250.00

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Summary Internal Standard Report

Sample Name	J8403-FS(3)	**Injection Vial**	41
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:18:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	37291.22	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	37291.22	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	85796.83	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	85796.83	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	94271.83	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	94271.83	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	32963.14	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	32963.14	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	111200.88	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	111200.88	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	101045.19	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	101045.19	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	32270.19	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	32270.19	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	126555.42	250.00
PFDA_2	513.0 / 219.0	3.29	13C6-PFDA	519.0 / 474.0	126555.42	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	126256.88	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	126256.88	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	121123.31	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	121123.31	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	96462.84	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	96462.84	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	96462.84	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	96462.84	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	17429.28	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	17429.28	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	21487.52	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	21487.52	250.00

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Summary Internal Standard Report

Sample Name	J8403-FS-D(5)	**Injection Vial**	42
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:29:05	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	26268.25	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	26268.25	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	59703.93	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	59703.93	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	66730.74	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	66730.74	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	25457.23	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	25457.23	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	85345.86	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	85345.86	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	85914.94	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	85914.94	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	26333.85	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	26333.85	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	90226.13	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	90226.13	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	87245.98	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	87245.98	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	85493.48	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	85493.48	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	69836.75	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	69836.75	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	69836.75	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	69836.75	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	12911.04	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	12911.04	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15180.48	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15180.48	250.00

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Summary Internal Standard Report

Sample Name	J8404-FS(3)	**Injection Vial**	43
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:39:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	30686.90	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	30686.90	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	72344.19	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	72344.19	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	77086.40	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	77086.40	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	25678.54	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	25678.54	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	88825.11	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	88825.11	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	93493.99	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	93493.99	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	26755.25	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	26755.25	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	103375.04	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	103375.04	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	96290.05	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96290.05	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	101611.48	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	101611.48	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	80595.83	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	80595.83	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	80595.83	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	80595.83	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	12431.82	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	12431.82	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15727.97	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15727.97	250.00

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Summary Internal Standard Report

Sample Name	J8404-FS-D(5)	**Injection Vial**	44
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:50:48	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	29238.96	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	29238.96	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	68197.95	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	68197.95	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	74944.93	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	74944.93	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	25036.29	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	25036.29	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	88379.75	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	88379.75	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	86805.19	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	86805.19	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	30686.29	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	30686.29	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	103318.97	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	103318.97	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	98393.35	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	98393.35	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	105475.60	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	105475.60	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	79196.61	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	79196.61	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	79196.61	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	79196.61	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14249.10	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14249.10	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14203.28	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14203.28	250.00

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Summary Internal Standard Report

Sample Name	J8404-FS-D(7)	**Injection Vial**	45
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:01:40	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	26165.19	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	26165.19	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	63200.70	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	63200.70	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	67124.61	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	67124.61	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	25447.25	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	25447.25	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	84751.83	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	84751.83	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	89539.94	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	89539.94	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	24883.37	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	24883.37	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	92819.02	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	92819.02	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	92436.04	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	92436.04	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	83951.30	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	83951.30	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	70502.99	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	70502.99	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	70502.99	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	70502.99	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	12595.42	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	12595.42	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14423.93	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14423.93	250.00

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Summary Internal Standard Report

Sample Name	J8405-FS(3)	**Injection Vial**	48
Sample ID	VC-AOC16-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:34:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	38043.89	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	38043.89	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	91521.67	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	91521.67	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	98160.59	250.00
PFHpA_2	363.0 / 169.0	2.23	13C4-PFHpA	367.0 / 322.0	98160.59	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	34730.31	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	34730.31	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	125172.18	250.00
PFOA_2	413.0 / 169.0	2.57	13C8-PFOA	421.0 / 376.0	125172.18	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	128895.59	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	128895.59	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	42192.77	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	42192.77	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	147346.85	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	147346.85	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	137406.49	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	137406.49	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	133425.56	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	133425.56	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	103755.83	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103755.83	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	103755.83	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103755.83	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	19857.34	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	19857.34	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	21537.04	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	21537.04	250.00

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Summary Internal Standard Report

Sample Name	J8406-FS(3)	**Injection Vial**	49
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:45:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	36616.66	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	36616.66	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	83214.71	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	83214.71	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	87683.01	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	87683.01	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	32758.13	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	32758.13	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	99213.25	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	99213.25	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	82976.72	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	82976.72	250.00
PFOS_1	499.0 / 80.0	3.03	13C8-PFOS	507.0 / 99.0	27453.72	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	27453.72	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	129095.24	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	129095.24	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	117414.96	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	117414.96	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	112984.78	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	112984.78	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	92287.17	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	92287.17	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	92287.17	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	92287.17	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16477.14	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16477.14	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18859.05	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18859.05	250.00

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Summary Internal Standard Report

Sample Name	J8406-FS-D(5)	**Injection Vial**	50
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:55:58	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	27031.50	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	27031.50	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	64494.64	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	64494.64	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	69541.00	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	69541.00	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	24834.36	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	24834.36	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	92476.49	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	92476.49	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	86943.06	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	86943.06	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	30905.16	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	30905.16	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	96775.23	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	96775.23	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	96707.48	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96707.48	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	93599.50	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	93599.50	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	74677.06	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74677.06	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	74677.06	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74677.06	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14701.62	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14701.62	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18568.51	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18568.51	250.00

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Summary Internal Standard Report

Sample Name	J8407-FS(3)	**Injection Vial**	51
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:06:50	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	29989.74	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	29989.74	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	72448.80	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	72448.80	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	81379.30	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	81379.30	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	29637.12	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	29637.12	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	88726.02	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	88726.02	250.00
PFNA_1	463.0 / 419.0	3.05	13C9-PFNA	472.0 / 427.0	86173.83	250.00
PFNA_2	463.0 / 219.0	3.05	13C9-PFNA	472.0 / 427.0	86173.83	250.00
PFOS_1	499.0 / 80.0	3.00	13C8-PFOS	507.0 / 99.0	27315.66	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	27315.66	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	112753.78	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	112753.78	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	96618.88	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96618.88	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	104772.32	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	104772.32	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	81870.96	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	81870.96	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	81870.96	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	81870.96	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14021.42	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14021.42	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14805.28	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14805.28	250.00

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Summary Internal Standard Report

Sample Name	J8407-FS-D(5)	**Injection Vial**	52
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:17:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	27037.23	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	27037.23	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	63868.31	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	63868.31	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	72476.23	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	72476.23	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	27174.95	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	27174.95	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	82506.26	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	82506.26	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	83800.14	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	83800.14	250.00
PFOS_1	499.0 / 80.0	3.02	13C8-PFOS	507.0 / 99.0	25557.67	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	25557.67	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	97989.40	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	97989.40	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	96237.79	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96237.79	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	86834.85	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	86834.85	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	72439.31	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	72439.31	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	72439.31	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	72439.31	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13808.65	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13808.65	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14134.19	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14134.19	250.00

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Summary Internal Standard Report

Sample Name	J8407-FS-D(7)	**Injection Vial**	53
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:28:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	28471.90	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	28471.90	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	64844.87	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	64844.87	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	66382.84	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	66382.84	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	25948.59	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	25948.59	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	91945.16	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	91945.16	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	90601.81	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	90601.81	250.00
PFOS_1	499.0 / 80.0	3.02	13C8-PFOS	507.0 / 99.0	31222.61	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	31222.61	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	99497.68	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	99497.68	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	97843.42	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	97843.42	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	98323.15	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	98323.15	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	74075.22	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74075.22	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	74075.22	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74075.22	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13768.24	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13768.24	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15766.50	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15766.50	250.00

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Summary Internal Standard Report

Sample Name	J8408-FS(3)	**Injection Vial**	54
Sample ID	VC-AOC16-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:39:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	29074.99	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	29074.99	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	66944.01	250.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	66944.01	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	75530.79	250.00
PFHpA_2	363.0 / 169.0	2.24	13C4-PFHpA	367.0 / 322.0	75530.79	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	24359.46	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	24359.46	236.50
PFOA_1	413.0 / 369.0	2.65	13C8-PFOA	421.0 / 376.0	92814.80	250.00
PFOA_2	413.0 / 169.0	2.55	13C8-PFOA	421.0 / 376.0	92814.80	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	92966.29	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	92966.29	250.00
PFOS_1	499.0 / 80.0	3.04	13C8-PFOS	507.0 / 99.0	29561.26	239.25
PFOS_2	499.0 / 99.0	3.05	13C8-PFOS	507.0 / 99.0	29561.26	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	98747.19	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	98747.19	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	103858.76	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	103858.76	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	97159.50	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	97159.50	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	77920.35	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	77920.35	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	77920.35	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	77920.35	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13644.36	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13644.36	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14829.51	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14829.51	250.00

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Summary Internal Standard Report

Sample Name	J8409-FS(3)	**Injection Vial**	1
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:50:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	33923.80	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	33923.80	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	78544.14	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	78544.14	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	85747.90	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	85747.90	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	28144.34	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	28144.34	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	101271.26	250.00
PFOA_2	413.0 / 169.0	2.65	13C8-PFOA	421.0 / 376.0	101271.26	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	84857.90	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	84857.90	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	23353.28	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	23353.28	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	116808.08	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	116808.08	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	109414.98	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	109414.98	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	119593.56	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	119593.56	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	90217.02	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	90217.02	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	90217.02	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	90217.02	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14190.78	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14190.78	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18149.71	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18149.71	250.00

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Summary Internal Standard Report

Sample Name	J8409-FS-D(5)	**Injection Vial**	2
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:01:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	26413.75	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	26413.75	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	64366.10	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	64366.10	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	66066.82	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	66066.82	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	23466.42	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	23466.42	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	87617.26	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	87617.26	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	88417.63	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	88417.63	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	29811.07	239.25
PFOS_2	499.0 / 99.0	3.05	13C8-PFOS	507.0 / 99.0	29811.07	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	95009.16	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	95009.16	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	91697.89	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	91697.89	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	89144.06	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	89144.06	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	72762.24	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	72762.24	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	72762.24	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	72762.24	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14759.41	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14759.41	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15697.70	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15697.70	250.00

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Summary Internal Standard Report

Sample Name	J8410-FS(3)	**Injection Vial**	5
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:33:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	30055.18	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	30055.18	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	66000.98	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	66000.98	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	70152.38	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	70152.38	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	23047.31	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	23047.31	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	92634.45	250.00
PFOA_2	413.0 / 169.0	2.65	13C8-PFOA	421.0 / 376.0	92634.45	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	77728.31	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	77728.31	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	24356.91	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	24356.91	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	107898.11	250.00
PFDA_2	513.0 / 219.0	3.40	13C6-PFDA	519.0 / 474.0	107898.11	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	100336.61	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	100336.61	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	94808.42	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	94808.42	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	74765.80	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74765.80	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	74765.80	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	74765.80	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14828.24	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14828.24	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16386.95	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16386.95	250.00

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Summary Internal Standard Report

Sample Name	J8410-FS-D(5)	**Injection Vial**	6
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:44:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	24956.59	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	24956.59	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	63781.65	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	63781.65	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	66562.38	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	66562.38	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	24497.93	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	24497.93	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	91521.77	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	91521.77	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	85351.60	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	85351.60	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	26882.31	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	26882.31	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	95682.68	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	95682.68	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	90655.16	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	90655.16	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	86376.96	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	86376.96	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	72011.02	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	72011.02	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	72011.02	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	72011.02	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13861.48	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13861.48	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	14087.00	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	14087.00	250.00

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Summary Internal Standard Report

Sample Name	J8411-FS(3)	**Injection Vial**	7
Sample ID	VC-AOC16-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:55:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	33771.59	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	33771.59	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	74825.46	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	74825.46	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	80328.06	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	80328.06	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	31233.79	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	31233.79	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	98723.89	250.00
PFOA_2	413.0 / 169.0	2.65	13C8-PFOA	421.0 / 376.0	98723.89	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	103240.76	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	103240.76	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	35308.58	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	35308.58	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	111158.40	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	111158.40	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	107239.40	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	107239.40	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	105067.43	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	105067.43	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	82825.50	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	82825.50	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	82825.50	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	82825.50	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	13888.66	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	13888.66	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	15729.96	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	15729.96	250.00

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Summary Internal Standard Report

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:41:02	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.04	13C2-PFDA	515.0 / 470.0	83522.57	250.00
d3-MeFOSAA	573.0 / 419.0	3.59	13C4-PFOS	503.0 / 99.0	27916.23	239.25
d5-EtFOSAA	589.0 / 419.0	3.75	13C4-PFOS	503.0 / 99.0	27916.23	239.25
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	75584.96	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	75584.96	250.00
13C8-PFOA	421.0 / 376.0	2.68	13C2-PFOA	415.0 / 370.0	75584.96	250.00
13C9-PFNA	472.0 / 427.0	3.07	13C2-PFOA	415.0 / 370.0	75584.96	250.00
13C6-PFDA	519.0 / 474.0	3.43	13C2-PFDA	515.0 / 470.0	83522.57	250.00
13C7-PFUnA	570.0 / 525.0	3.75	13C2-PFDA	515.0 / 470.0	83522.57	250.00
13C2-PFTeDA	715.0 / 670.0	4.51	13C2-PFDA	515.0 / 470.0	83522.57	250.00
13C3-PFBS	302.0 / 99.0	1.53	13C4-PFOS	503.0 / 99.0	27916.23	239.25
13C3-PFHxS	402.0 / 99.0	2.29	13C4-PFOS	503.0 / 99.0	27916.23	239.25
13C8-PFOS	507.0 / 99.0	3.07	13C4-PFOS	503.0 / 99.0	27916.23	239.25

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Summary Internal Standard Report

Sample Name	CR894PB-FS(3)	**Injection Vial**	25
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:24:29	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	87598.10	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	28483.71	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	28483.71	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	77779.32	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	77779.32	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	77779.32	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	77779.32	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	87598.10	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	87598.10	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	87598.10	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	28483.71	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	28483.71	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	28483.71	239.25

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Summary Internal Standard Report

Sample Name	CR895LCS-FS(3)	**Injection Vial**	26
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:35:21	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	96516.75	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	26540.09	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	26540.09	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	80627.48	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	80627.48	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	80627.48	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	80627.48	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	96516.75	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	96516.75	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	96516.75	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26540.09	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	26540.09	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	26540.09	239.25

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Summary Internal Standard Report

Sample Name	J8381-FS(3)	**Injection Vial**	27
Sample ID	VC-PM64B-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:46:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	97092.55	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	30458.62	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30458.62	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	83197.27	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	83197.27	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	83197.27	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	83197.27	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	97092.55	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	97092.55	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	97092.55	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30458.62	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	30458.62	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	30458.62	239.25

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Summary Internal Standard Report

Sample Name	J8386-FS(3)	**Injection Vial**	28
Sample ID	VC-HS09-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:57:04	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	80353.79	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	24024.25	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	24024.25	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	68003.42	250.00
13C4-PFHpA	367.0 / 322.0	2.26	13C2-PFOA	415.0 / 370.0	68003.42	250.00
13C8-PFOA	421.0 / 376.0	2.67	13C2-PFOA	415.0 / 370.0	68003.42	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	68003.42	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	80353.79	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	80353.79	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	80353.79	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	24024.25	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	24024.25	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	24024.25	239.25

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Summary Internal Standard Report

Sample Name	J8387-FS(3)	**Injection Vial**	29
Sample ID	VC-HS09-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:07:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	91876.25	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	26712.19	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	26712.19	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	78419.52	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	78419.52	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	78419.52	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	78419.52	250.00
13C6-PFDA	519.0 / 474.0	3.42	13C2-PFDA	515.0 / 470.0	91876.25	250.00
13C7-PFUnA	570.0 / 525.0	3.74	13C2-PFDA	515.0 / 470.0	91876.25	250.00
13C2-PFTeDA	715.0 / 670.0	4.50	13C2-PFDA	515.0 / 470.0	91876.25	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26712.19	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	26712.19	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	26712.19	239.25

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Summary Internal Standard Report

Sample Name	J8388-FS(3)	**Injection Vial**	30
Sample ID	VC-HS09-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:18:49	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	83243.91	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	29675.61	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	29675.61	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	69944.95	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	69944.95	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	69944.95	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	69944.95	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	83243.91	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	83243.91	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	83243.91	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	29675.61	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	29675.61	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	29675.61	239.25

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Summary Internal Standard Report

Sample Name	J8389-FS(3)	**Injection Vial**	31
Sample ID	VC-HS09-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:29:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	91186.86	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	27521.24	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	27521.24	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	80073.50	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	80073.50	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	80073.50	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	80073.50	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	91186.86	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	91186.86	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	91186.86	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27521.24	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	27521.24	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	27521.24	239.25

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Summary Internal Standard Report

Sample Name	J8390-FS(3)	**Injection Vial**	32
Sample ID	VC-HS09-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:40:32	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	82560.02	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	22744.70	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	22744.70	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	67737.11	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	67737.11	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	67737.11	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	67737.11	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	82560.02	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	82560.02	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	82560.02	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	22744.70	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	22744.70	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	22744.70	239.25

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Summary Internal Standard Report

Sample Name	J8391-FS(3)	**Injection Vial**	33
Sample ID	VC-HS09-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:51:23	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	91864.56	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	25812.97	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	25812.97	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	72630.68	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	72630.68	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	72630.68	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	72630.68	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	91864.56	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	91864.56	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	91864.56	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	25812.97	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	25812.97	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	25812.97	239.25

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Summary Internal Standard Report

Sample Name	J8392-FS(3)	**Injection Vial**	34
Sample ID	VC-HS09-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:02:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	95337.53	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	30535.65	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30535.65	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	84878.15	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	84878.15	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	84878.15	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	84878.15	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	95337.53	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	95337.53	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	95337.53	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30535.65	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30535.65	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	30535.65	239.25

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Summary Internal Standard Report

Sample Name	J8393MS-FS(3)	**Injection Vial**	37
Sample ID	VC-HS09-SB03-0506-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:34:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	94762.03	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	26211.37	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	26211.37	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	80729.09	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	80729.09	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	80729.09	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	80729.09	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	94762.03	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	94762.03	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	94762.03	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26211.37	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	26211.37	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	26211.37	239.25

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Summary Internal Standard Report

Sample Name	J8394MSD-FS(3)	**Injection Vial**	38
Sample ID	VC-HS09-SB03-0506-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:45:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	88407.17	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	30754.97	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30754.97	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	74263.57	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	74263.57	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	74263.57	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	74263.57	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	88407.17	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	88407.17	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	88407.17	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30754.97	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30754.97	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	30754.97	239.25

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Summary Internal Standard Report

Sample Name	J8401-FS(3)	**Injection Vial**	39
Sample ID	VC-HS09-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:56:30	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.03	13C2-PFDA	515.0 / 470.0	105502.02	250.00
d3-MeFOSAA	573.0 / 419.0	3.58	13C4-PFOS	503.0 / 99.0	32561.66	239.25
d5-EtFOSAA	589.0 / 419.0	3.74	13C4-PFOS	503.0 / 99.0	32561.66	239.25
13C5-PFHxA	318.0 / 273.0	1.85	13C2-PFOA	415.0 / 370.0	87404.22	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	87404.22	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	87404.22	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	87404.22	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	105502.02	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	105502.02	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	105502.02	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	32561.66	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	32561.66	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	32561.66	239.25

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Summary Internal Standard Report

Sample Name	J8402-FS(3)	**Injection Vial**	40
Sample ID	VC-HS09-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:07:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	89052.60	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	26916.80	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	26916.80	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	75974.71	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	75974.71	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	75974.71	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	75974.71	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	89052.60	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	89052.60	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	89052.60	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26916.80	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	26916.80	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	26916.80	239.25

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Summary Internal Standard Report

Sample Name	J8403-FS(3)	**Injection Vial**	41
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:18:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	94655.06	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	24350.39	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	24350.39	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	85965.39	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	85965.39	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	85965.39	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	85965.39	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	94655.06	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	94655.06	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	94655.06	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	24350.39	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	24350.39	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	24350.39	239.25

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Summary Internal Standard Report

Sample Name	J8403-FS-D(5)	**Injection Vial**	42
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:29:05	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	79888.05	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	24757.95	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	24757.95	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	76946.48	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	76946.48	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	76946.48	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	76946.48	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	79888.05	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	79888.05	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	79888.05	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	24757.95	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	24757.95	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	24757.95	239.25

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Summary Internal Standard Report

Sample Name	J8404-FS(3)	**Injection Vial**	43
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:39:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	91936.85	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	23471.38	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	23471.38	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	78411.40	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	78411.40	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	78411.40	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	78411.40	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	91936.85	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	91936.85	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	91936.85	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	23471.38	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	23471.38	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	23471.38	239.25

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Summary Internal Standard Report

Sample Name	J8404-FS-D(5)	**Injection Vial**	44
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:50:48	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	99337.94	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	24024.72	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	24024.72	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	80479.16	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	80479.16	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	80479.16	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	80479.16	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	99337.94	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	99337.94	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	99337.94	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	24024.72	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	24024.72	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	24024.72	239.25

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Summary Internal Standard Report

Sample Name	J8404-FS-D(7)	**Injection Vial**	45
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:01:40	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	87041.80	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	27938.59	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	27938.59	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	83104.01	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	83104.01	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	83104.01	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	83104.01	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	87041.80	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	87041.80	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	87041.80	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27938.59	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	27938.59	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	27938.59	239.25

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Summary Internal Standard Report

Sample Name	J8405-FS(3)	**Injection Vial**	48
Sample ID	VC-AOC16-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:34:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	107140.29	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	31809.83	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	31809.83	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	97924.01	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	97924.01	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	97924.01	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	97924.01	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	107140.29	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	107140.29	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	107140.29	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	31809.83	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	31809.83	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	31809.83	239.25

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Summary Internal Standard Report

Sample Name	J8406-FS(3)	**Injection Vial**	49
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:45:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	102852.70	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	19139.52	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	19139.52	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	81601.63	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	81601.63	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	81601.63	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	81601.63	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	102852.70	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	102852.70	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	102852.70	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	19139.52	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	19139.52	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	19139.52	239.25

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Summary Internal Standard Report

Sample Name	J8406-FS-D(5)	**Injection Vial**	50
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:55:58	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	103642.75	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	28486.83	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	28486.83	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	85894.30	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	85894.30	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	85894.30	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	85894.30	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	103642.75	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	103642.75	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	103642.75	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	28486.83	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	28486.83	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	28486.83	239.25

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Summary Internal Standard Report

Sample Name	J8407-FS(3)	**Injection Vial**	51
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:06:50	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	88161.48	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	20620.65	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	20620.65	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	73234.32	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	73234.32	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	73234.32	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	73234.32	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	88161.48	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	88161.48	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	88161.48	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	20620.65	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	20620.65	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	20620.65	239.25

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Summary Internal Standard Report

Sample Name	J8407-FS-D(5)	**Injection Vial**	52
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:17:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	88342.48	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	22690.76	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	22690.76	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	71869.31	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	71869.31	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	71869.31	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	71869.31	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	88342.48	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	88342.48	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	88342.48	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	22690.76	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	22690.76	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	22690.76	239.25

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Summary Internal Standard Report

Sample Name	J8407-FS-D(7)	**Injection Vial**	53
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:28:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	97005.37	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	27780.31	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	27780.31	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	87316.22	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	87316.22	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	87316.22	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	87316.22	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	97005.37	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	97005.37	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	97005.37	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27780.31	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	27780.31	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	27780.31	239.25

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Summary Internal Standard Report

Sample Name	J8408-FS(3)	**Injection Vial**	54
Sample ID	VC-AOC16-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:39:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	88217.48	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	25760.41	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	25760.41	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	74815.90	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	74815.90	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	74815.90	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	74815.90	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	88217.48	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	88217.48	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	88217.48	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	25760.41	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	25760.41	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	25760.41	239.25

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Summary Internal Standard Report

Sample Name	J8409-FS(3)	**Injection Vial**	1
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:50:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	99820.26	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	22165.59	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	22165.59	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	74991.82	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	74991.82	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	74991.82	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	74991.82	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	99820.26	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	99820.26	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	99820.26	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	22165.59	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	22165.59	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	22165.59	239.25

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Summary Internal Standard Report

Sample Name	J8409-FS-D(5)	**Injection Vial**	2
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:01:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	86950.54	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	25797.29	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	25797.29	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	78251.43	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	78251.43	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	78251.43	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	78251.43	250.00
13C6-PFDA	519.0 / 474.0	3.39	13C2-PFDA	515.0 / 470.0	86950.54	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	86950.54	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	86950.54	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	25797.29	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	25797.29	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	25797.29	239.25

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Summary Internal Standard Report

Sample Name	J8410-FS(3)	**Injection Vial**	5
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:33:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	88082.77	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	20132.90	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	20132.90	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	71304.44	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	71304.44	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	71304.44	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	71304.44	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	88082.77	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	88082.77	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	88082.77	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	20132.90	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	20132.90	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	20132.90	239.25

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Summary Internal Standard Report

Sample Name	J8410-FS-D(5)	**Injection Vial**	6
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:44:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	88709.92	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	25897.92	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	25897.92	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	75379.36	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	75379.36	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	75379.36	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	75379.36	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	88709.92	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	88709.92	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	88709.92	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	25897.92	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	25897.92	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	25897.92	239.25

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Summary Internal Standard Report

Sample Name	J8411-FS(3)	**Injection Vial**	7
Sample ID	VC-AOC16-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:55:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_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	99252.24	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	29698.16	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	29698.16	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	88363.21	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	88363.21	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	88363.21	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	88363.21	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	99252.24	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	99252.24	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	99252.24	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	29698.16	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	29698.16	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	29698.16	239.25

Chromatograms

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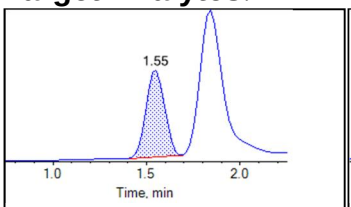
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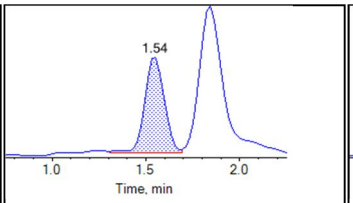
Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:25:01	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

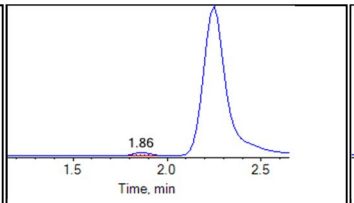
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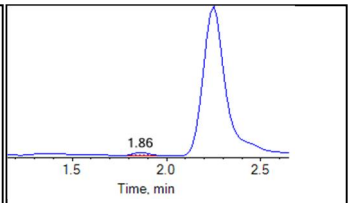
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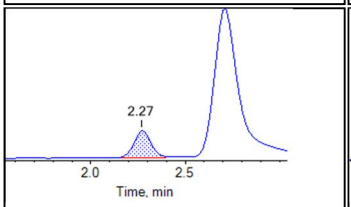
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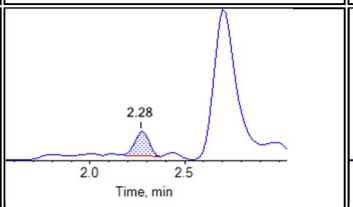
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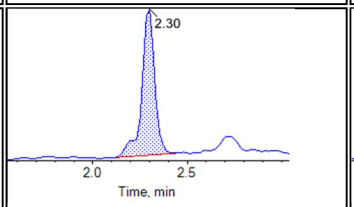
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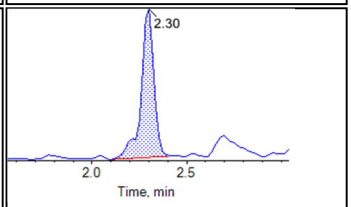
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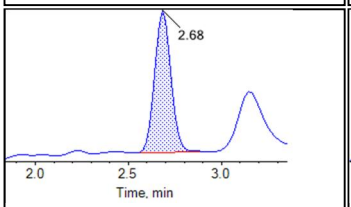
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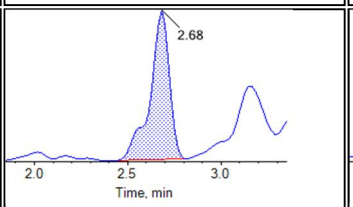
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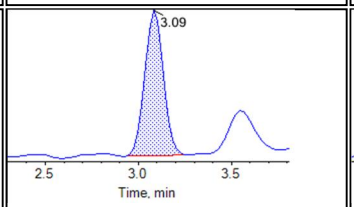
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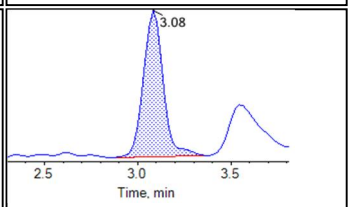
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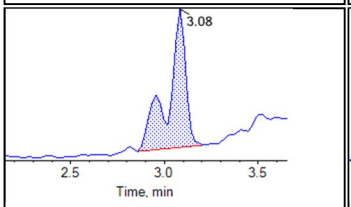
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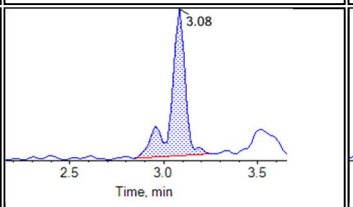
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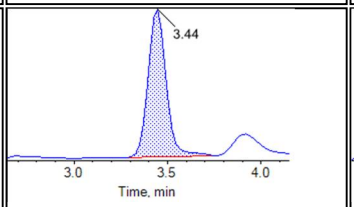
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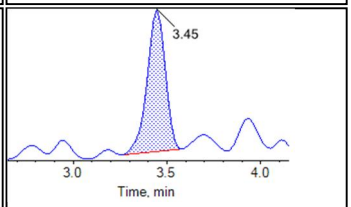
PFOS_1



PFOS_2



PFDA_1

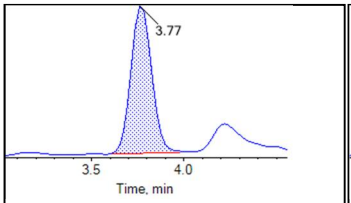


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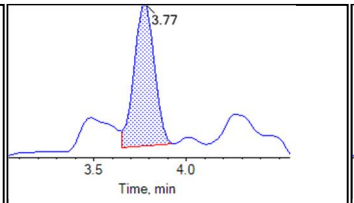
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Chromatogram Report

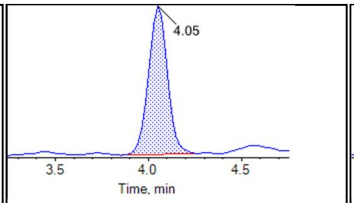
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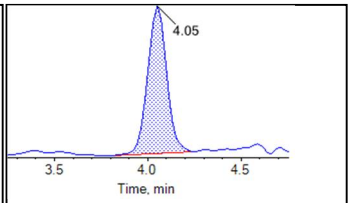
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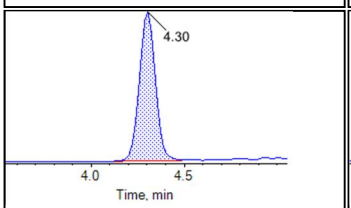
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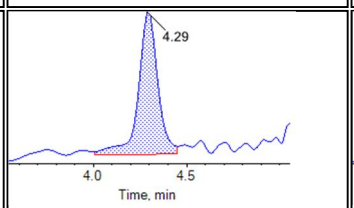
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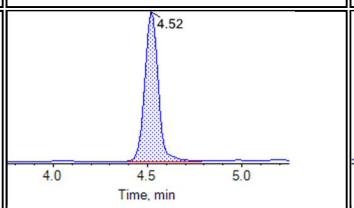
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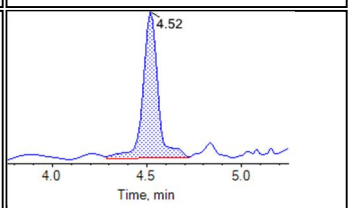
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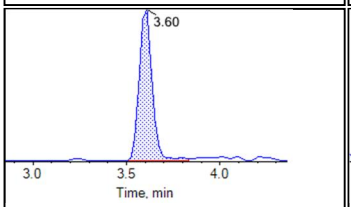
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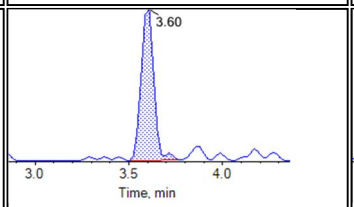
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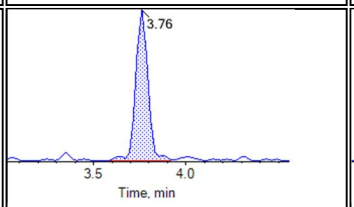
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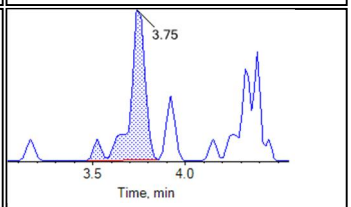
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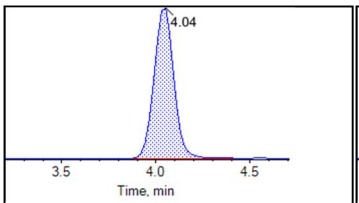


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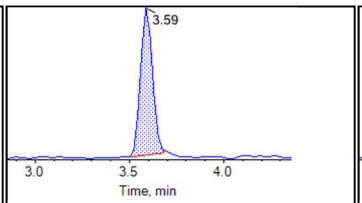


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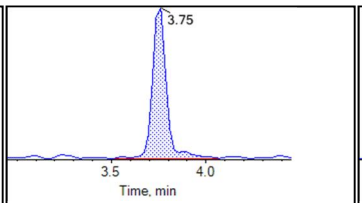
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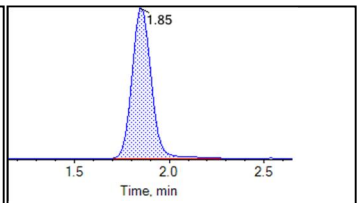
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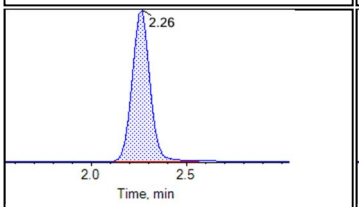
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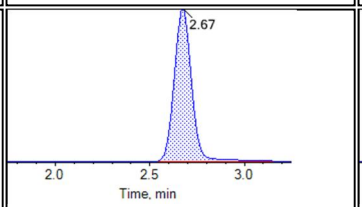
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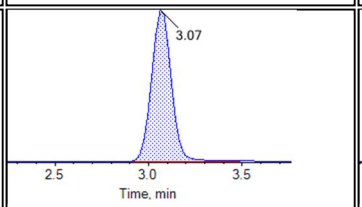
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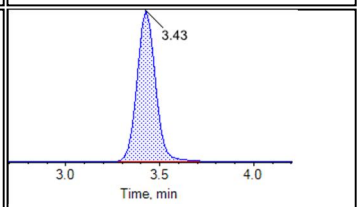
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13C8-PFOA



13C9-PFNA

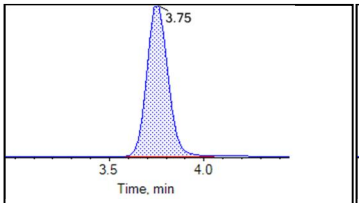


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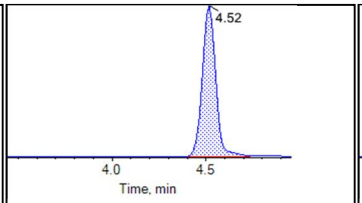
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Chromatogram Report

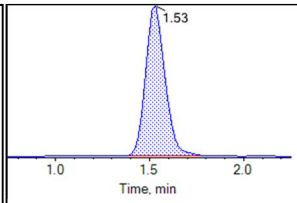
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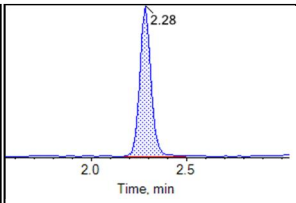
13C7-PFUnA



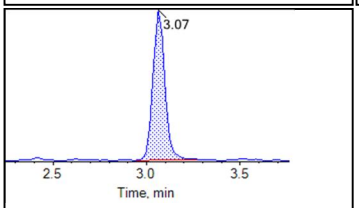
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

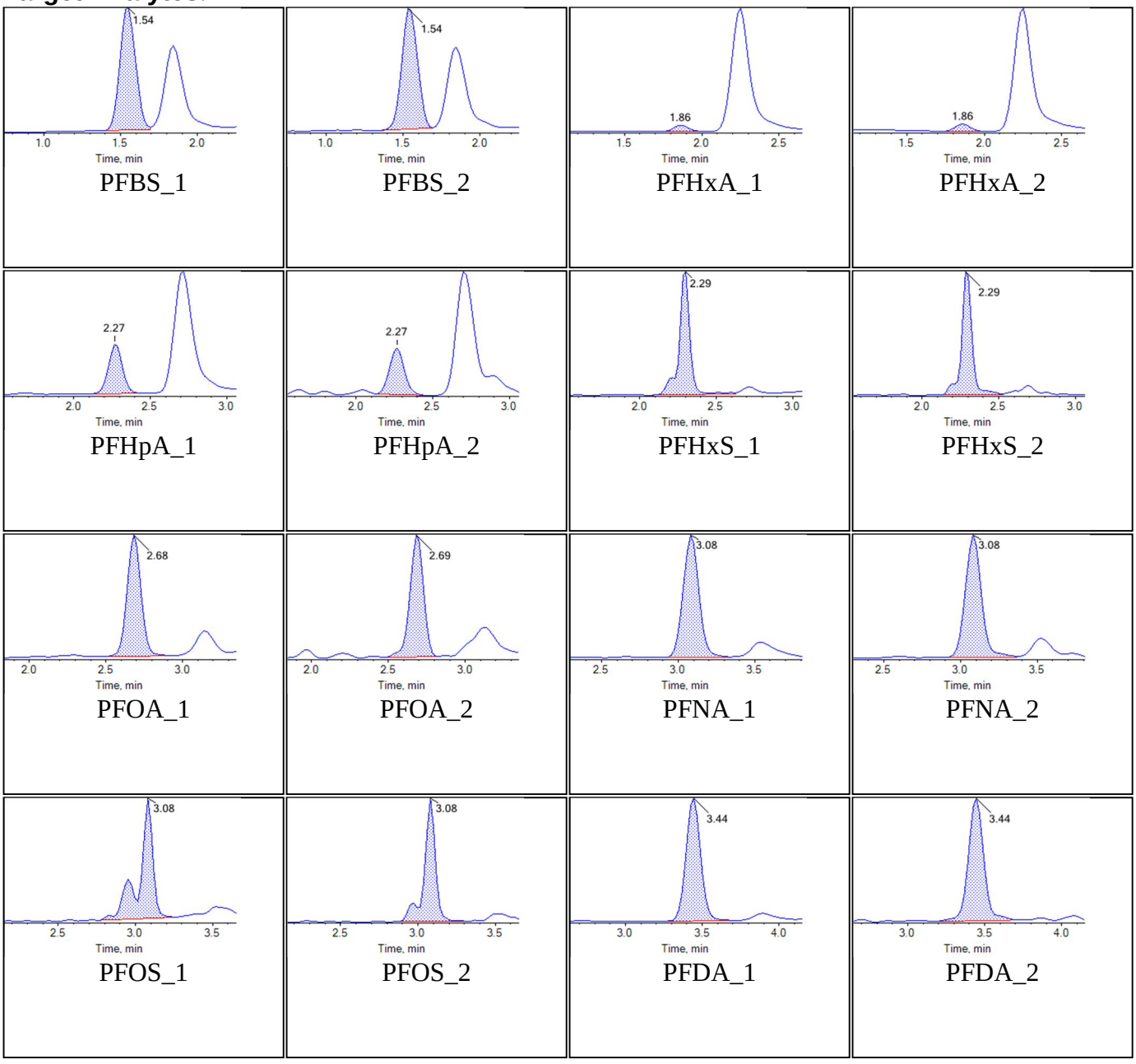
Chromatogram Report

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Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:35:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

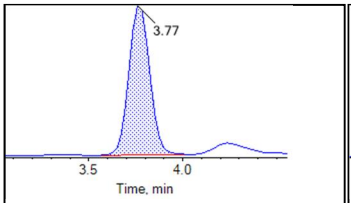
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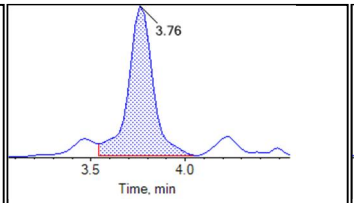
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Chromatogram Report

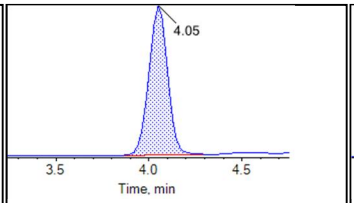
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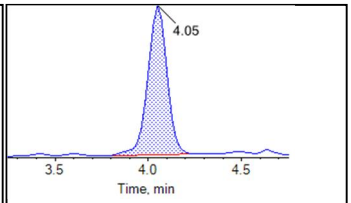
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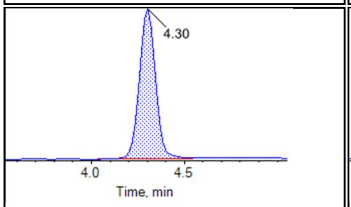
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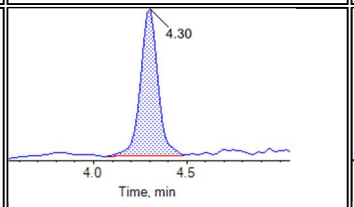
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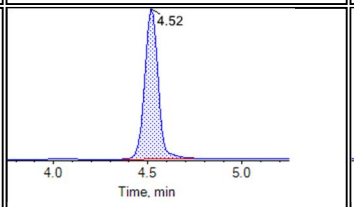
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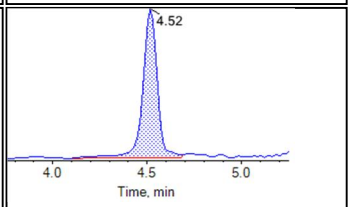
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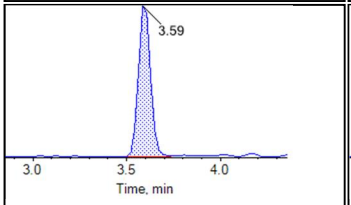
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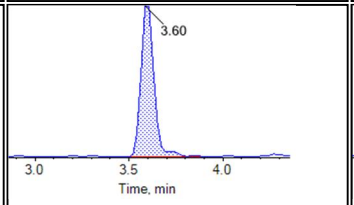
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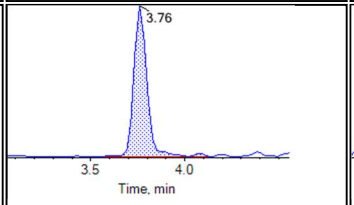
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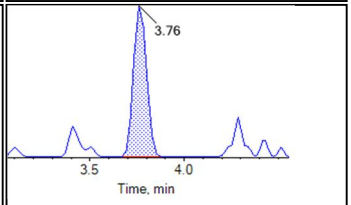
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NMeFOSAA_2

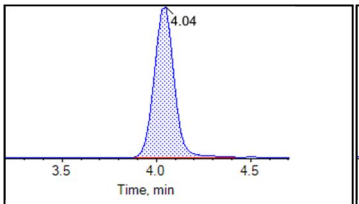


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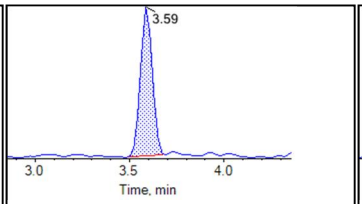


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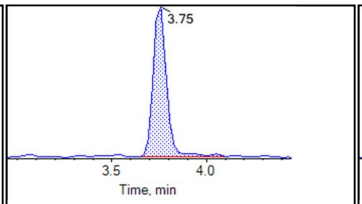
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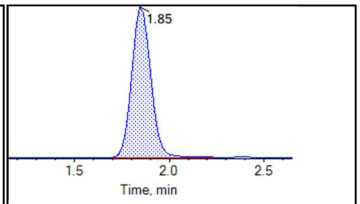
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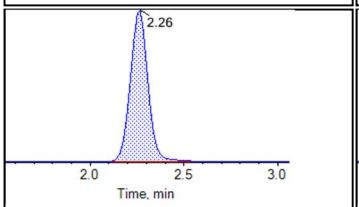
d3-MeFOSAA



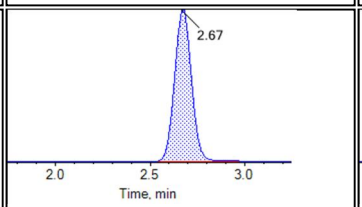
d5-EtFOSAA



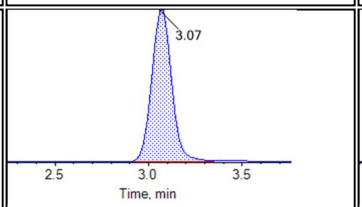
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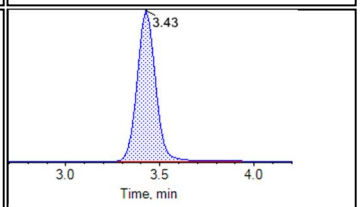
13C4-PFHpA



13C8-PFOA



13C9-PFNA

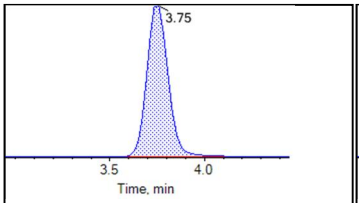


13C6-PFDA

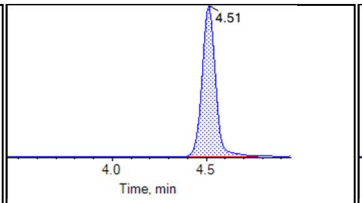
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Chromatogram Report

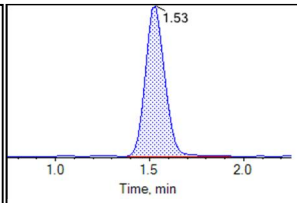
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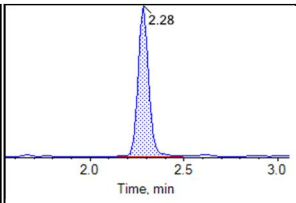
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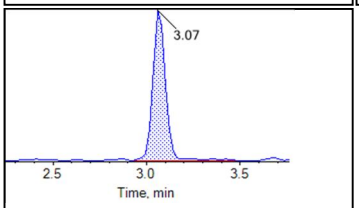
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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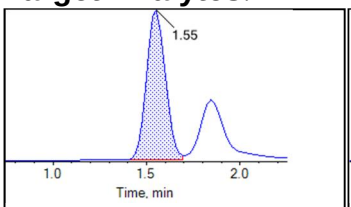
Chromatogram Report

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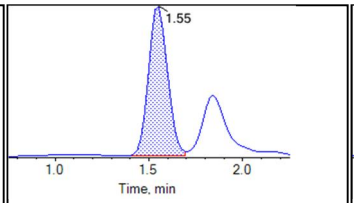
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Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:46:44	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

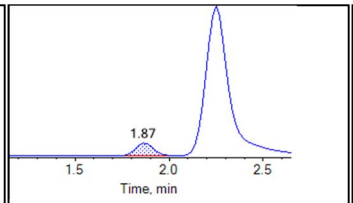
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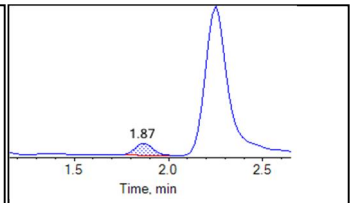
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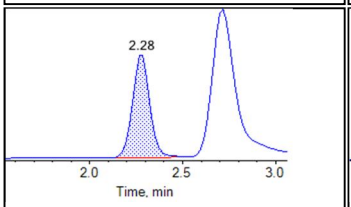
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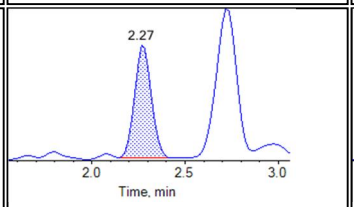
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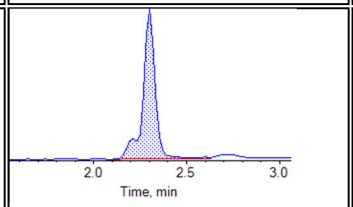
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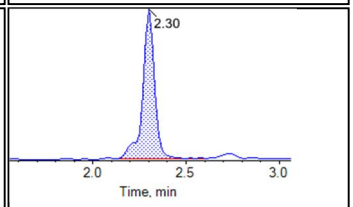
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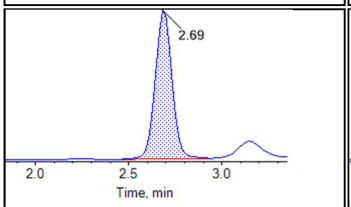
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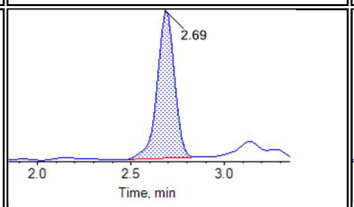
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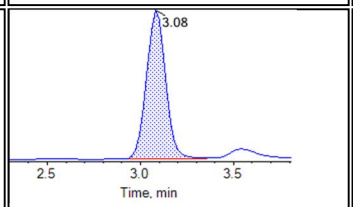
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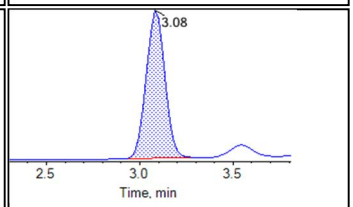
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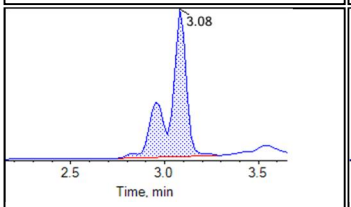
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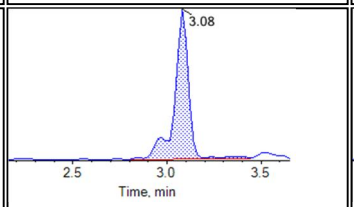
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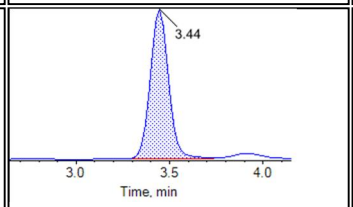
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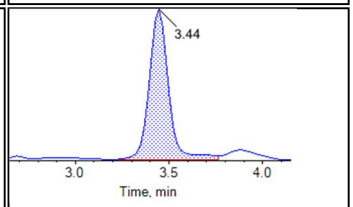
PFOS_1



PFOS_2



PFDA_1

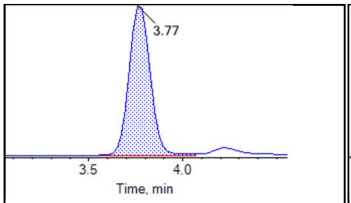


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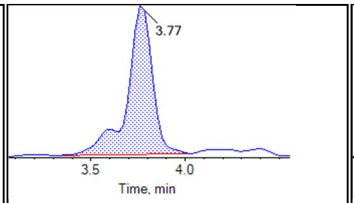
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Chromatogram Report

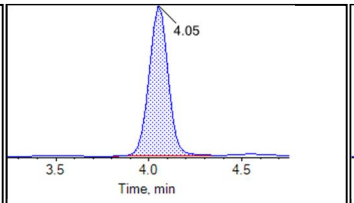
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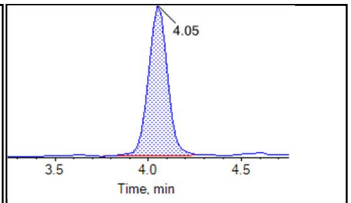
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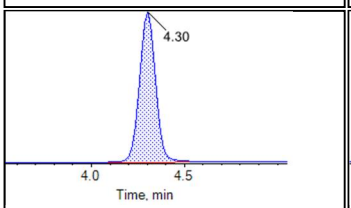
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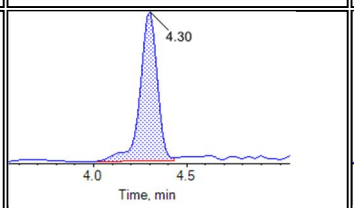
PFDoA_1



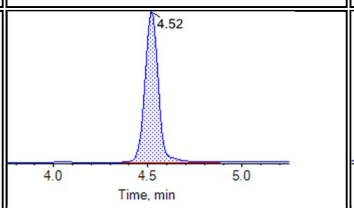
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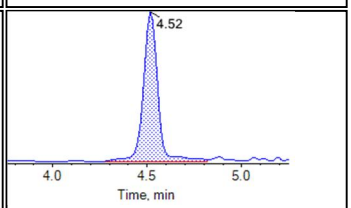
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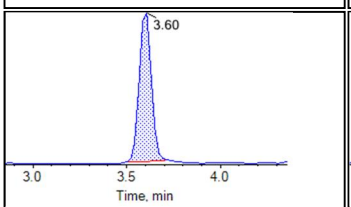
PFTrDA_2



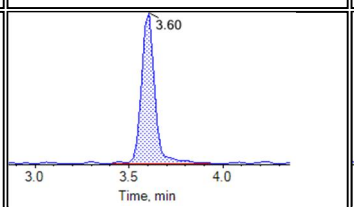
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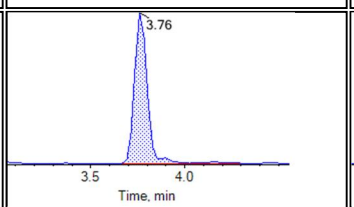
PFTeDA_2



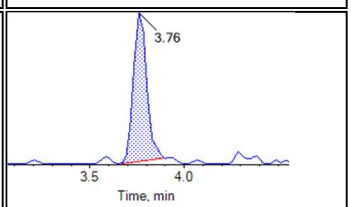
NMeFOSAA_1



NMeFOSAA_2

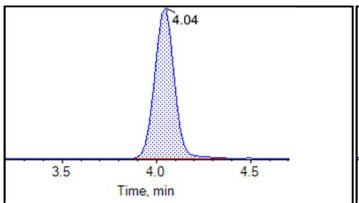


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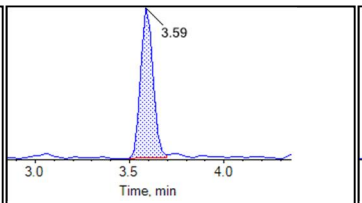


NEtFOSAA_2

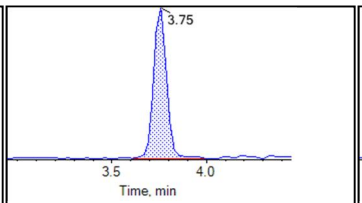
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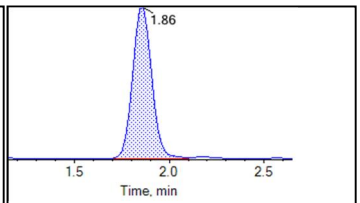
13C2-PFDoA



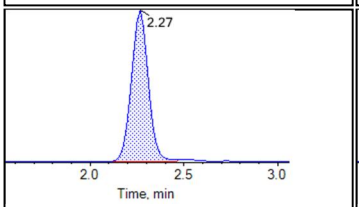
d3-MeFOSAA



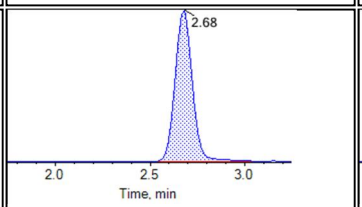
d5-EtFOSAA



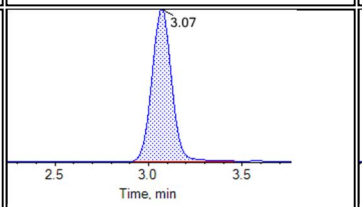
13C5-PFHxA



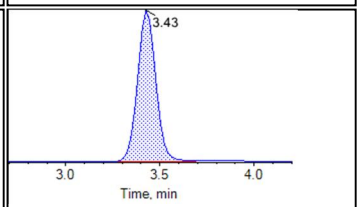
13C4-PFHpA



13C8-PFOA



13C9-PFNA

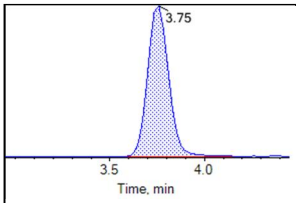


13C6-PFDA

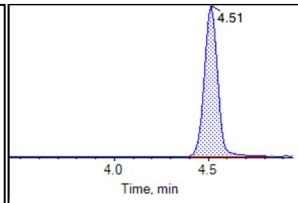
BATTELLE

Chromatogram Report

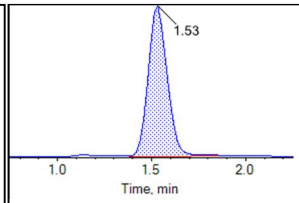
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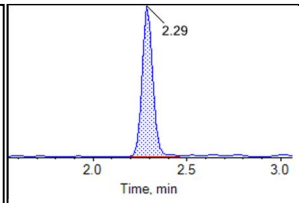
13C7-PFUnA



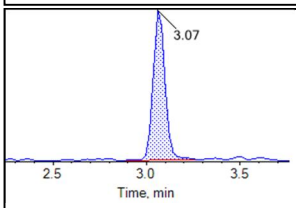
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

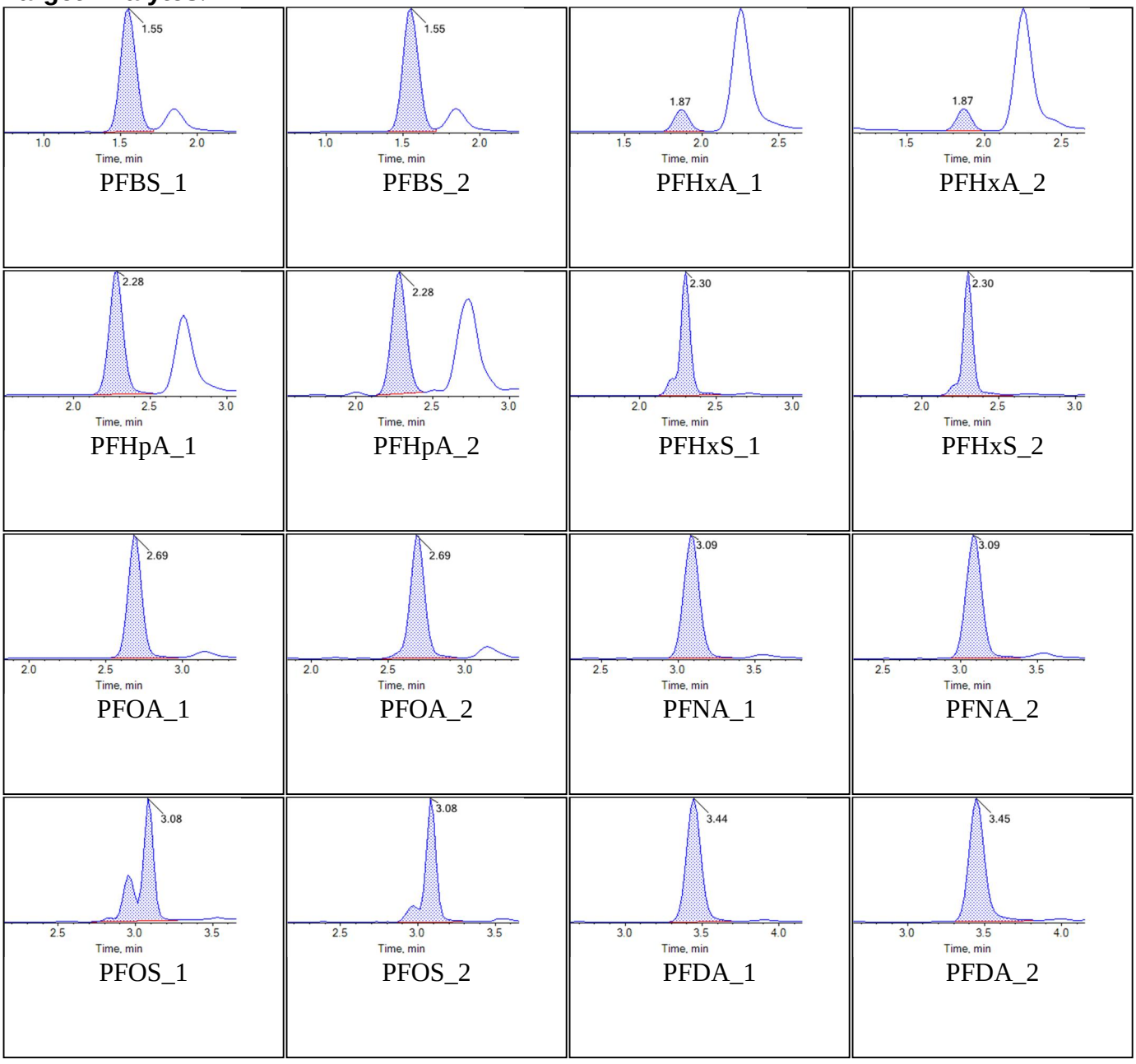
Chromatogram Report

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Printed: 17/10/2018 12:19:18 PM

Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:57:36	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

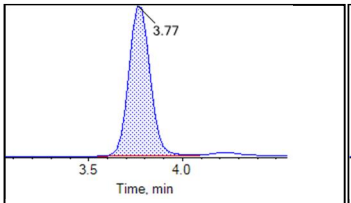
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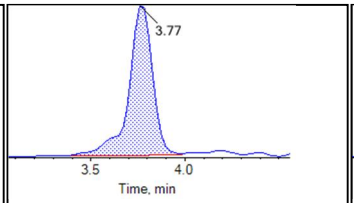
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Chromatogram Report

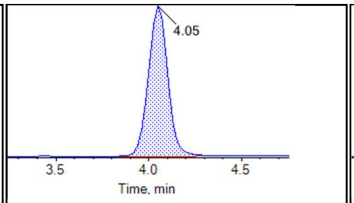
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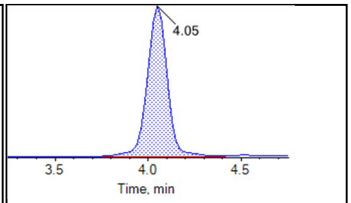
PFUnA_1



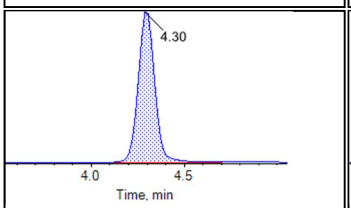
PFUnA_2



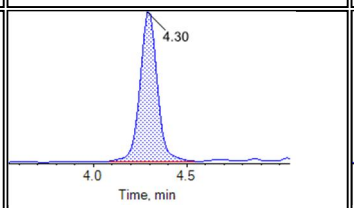
PFDoA_1



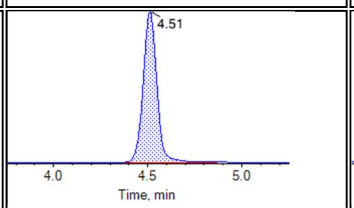
PFDoA_2



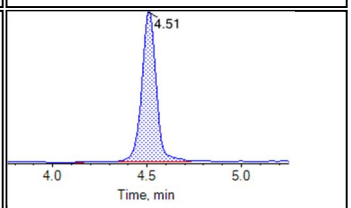
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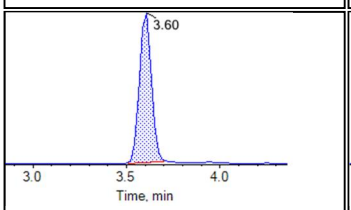
PFTrDA_2



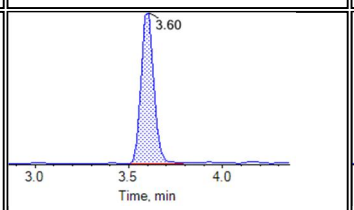
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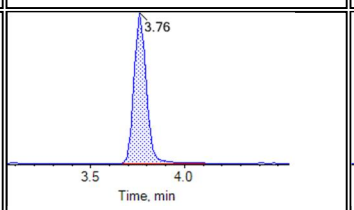
PFTeDA_2



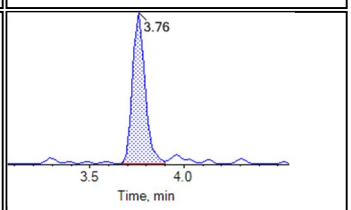
NMeFOSAA_1



NMeFOSAA_2

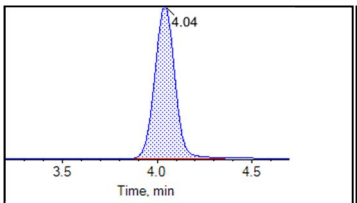


NEtFOSAA_1

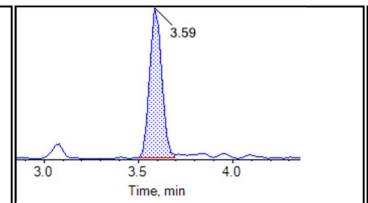


NEtFOSAA_2

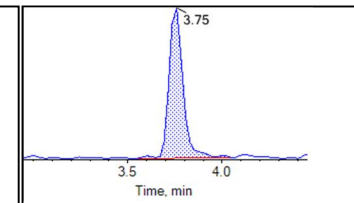
Internal Standards:



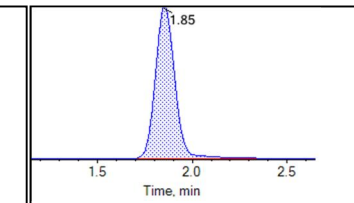
13C2-PFDoA



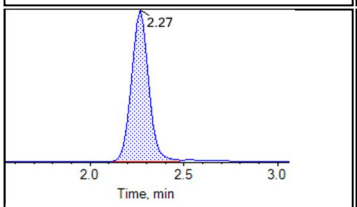
d3-MeFOSAA



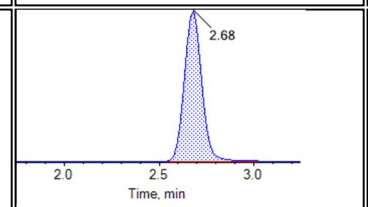
d5-EtFOSAA



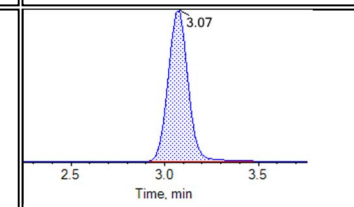
13C5-PFHxA



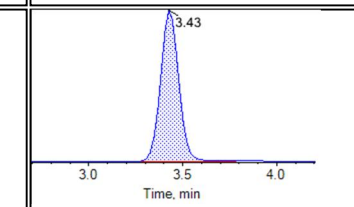
13C4-PFHpA



13C8-PFOA



13C9-PFNA

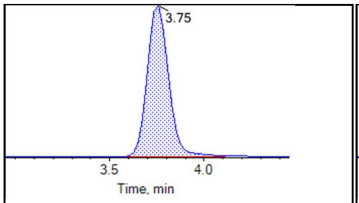


13C6-PFDA

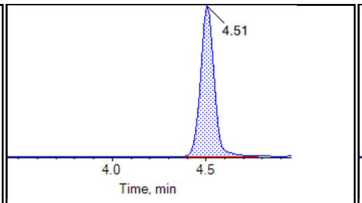
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Chromatogram Report

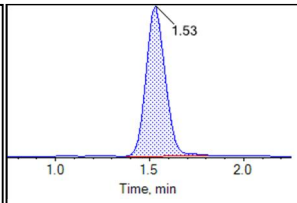
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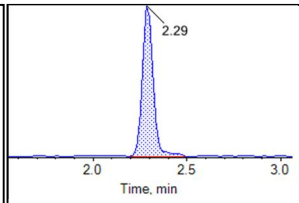
13C7-PFUnA



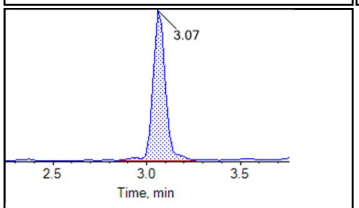
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

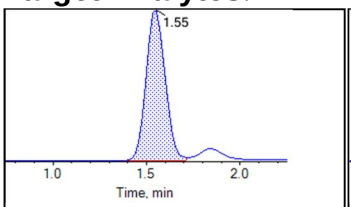
Chromatogram Report

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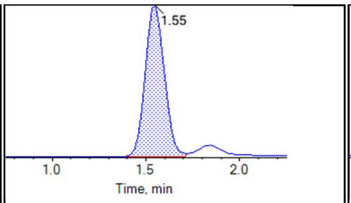
Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:08:28	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

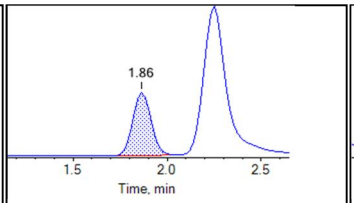
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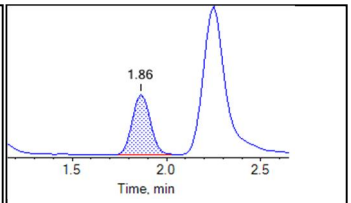
PFBS_1



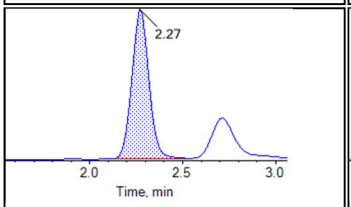
PFBS_2



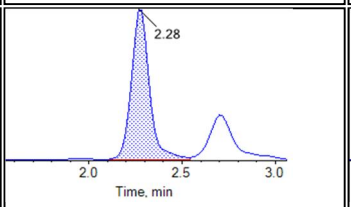
PFHxA_1



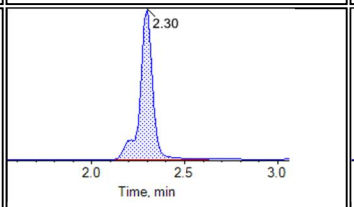
PFHxA_2



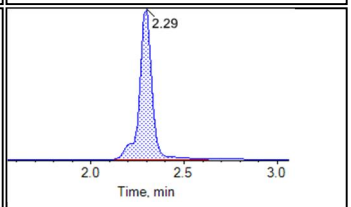
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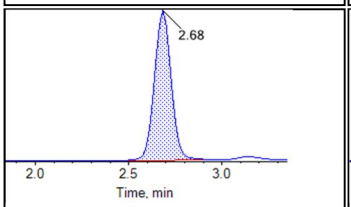
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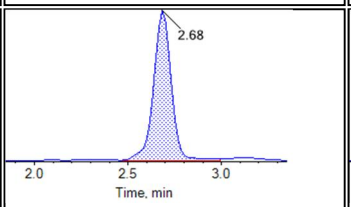
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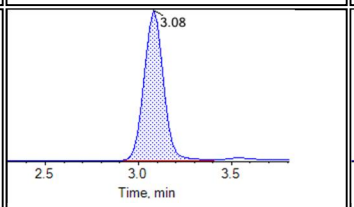
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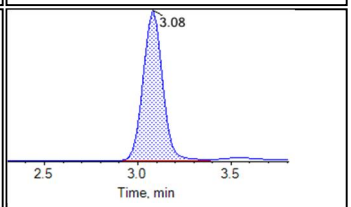
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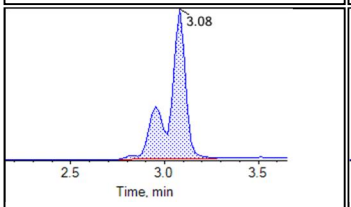
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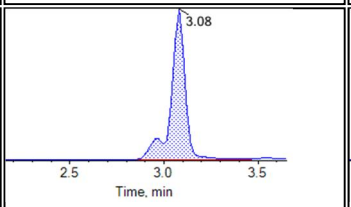
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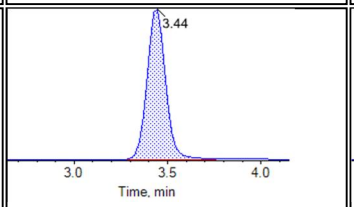
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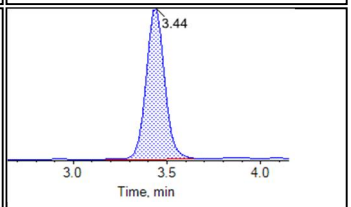
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PFOS_2



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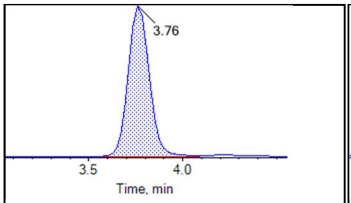


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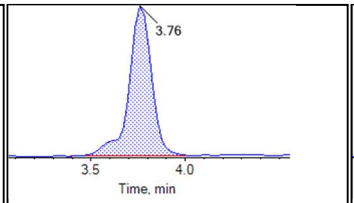
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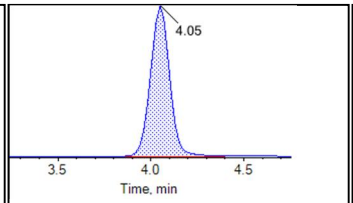
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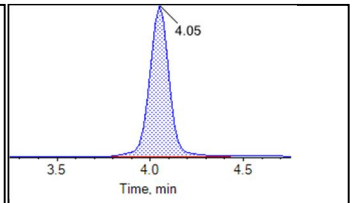
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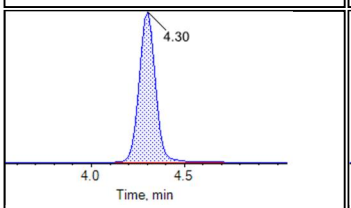
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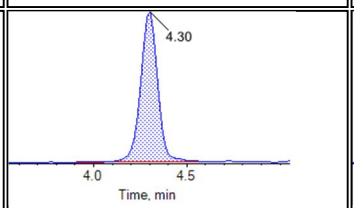
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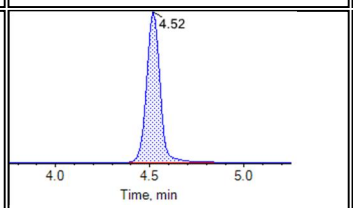
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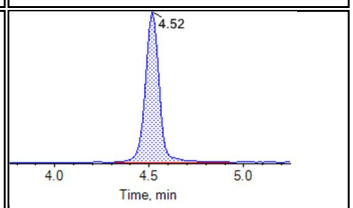
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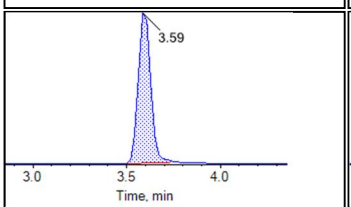
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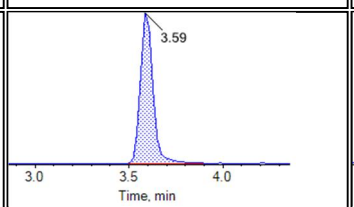
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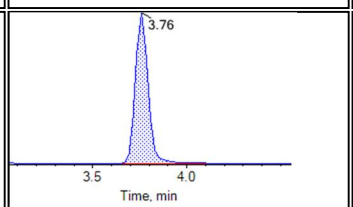
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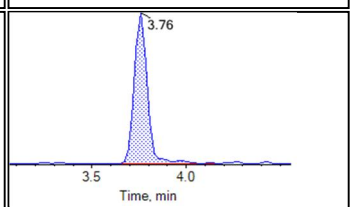
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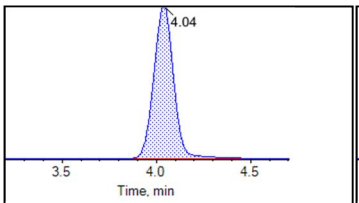


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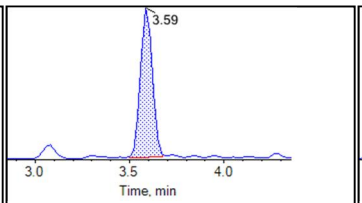


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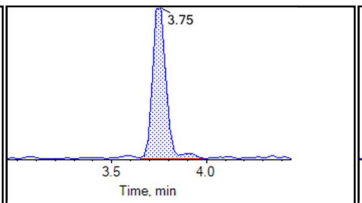
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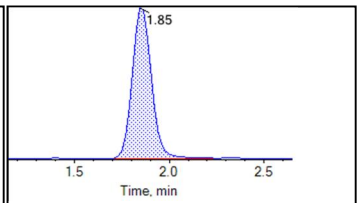
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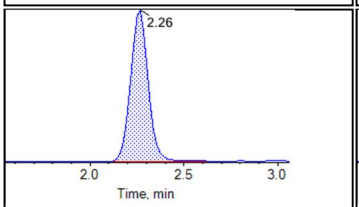
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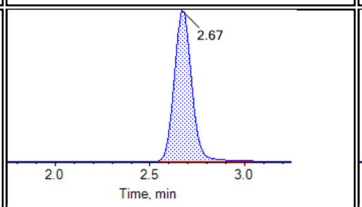
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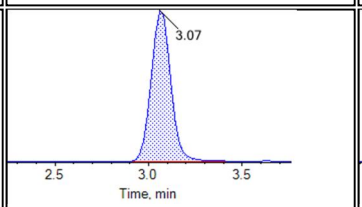
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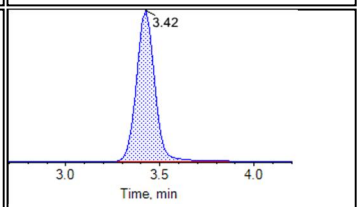
13C4-PFHpA



13C8-PFOA



13C9-PFNA

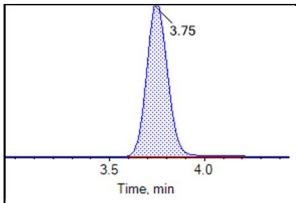


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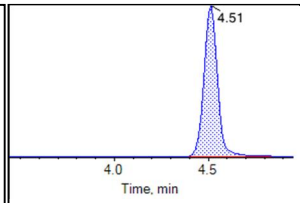
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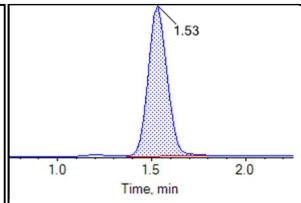
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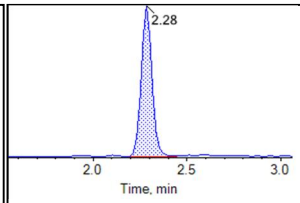
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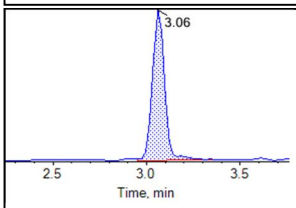
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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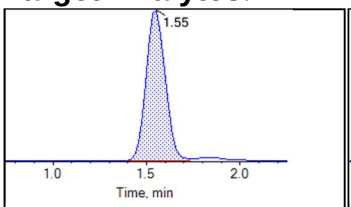
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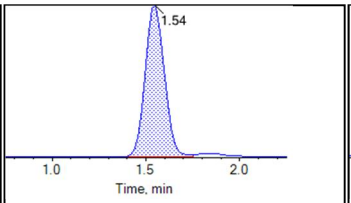
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Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:19:19	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

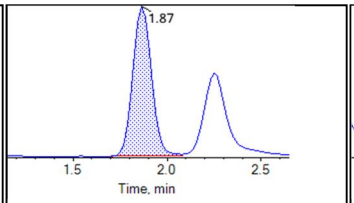
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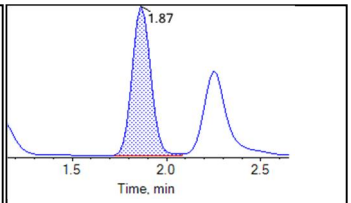
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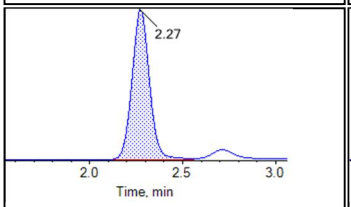
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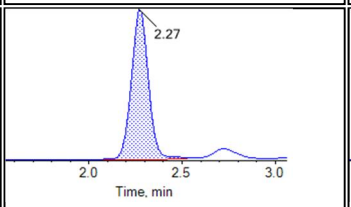
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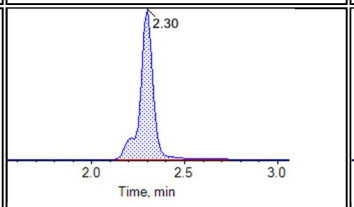
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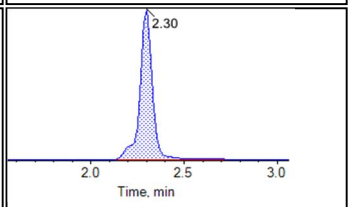
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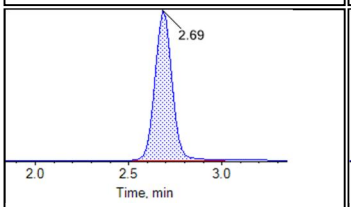
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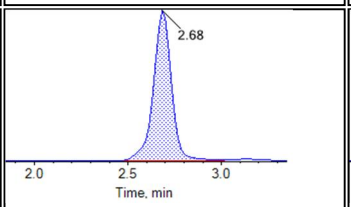
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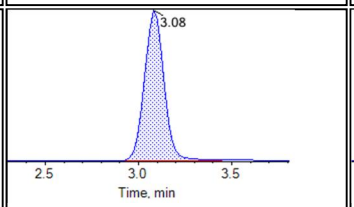
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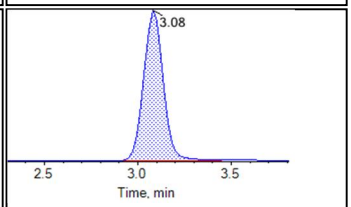
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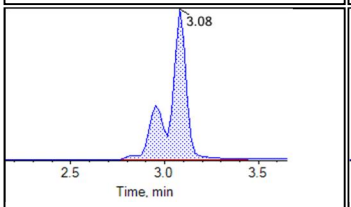
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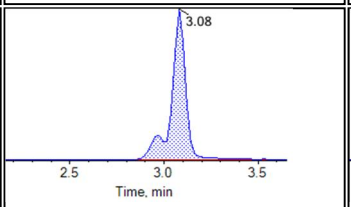
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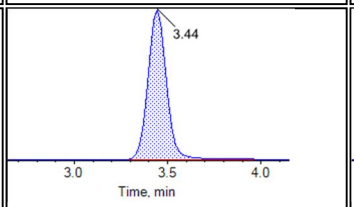
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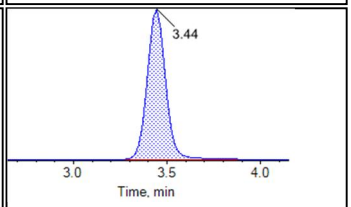
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PFOS_2



PFDA_1

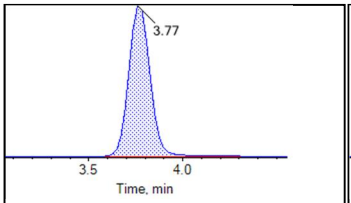


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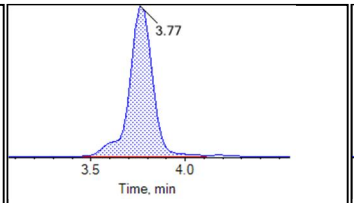
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Chromatogram Report

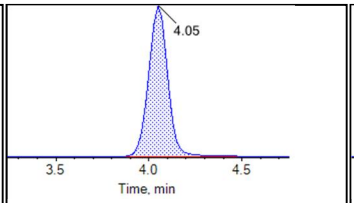
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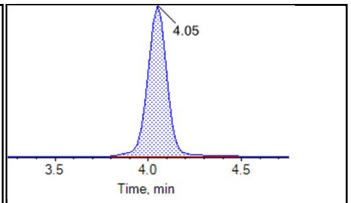
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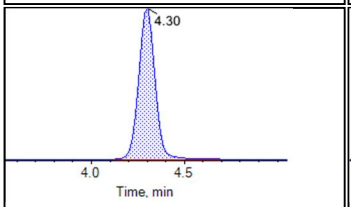
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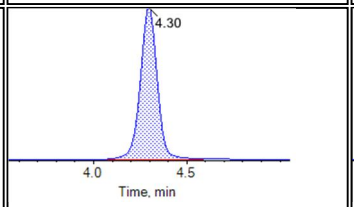
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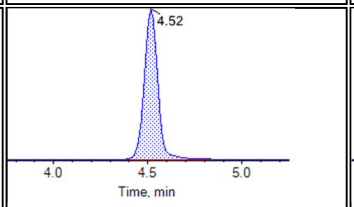
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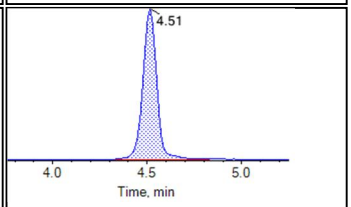
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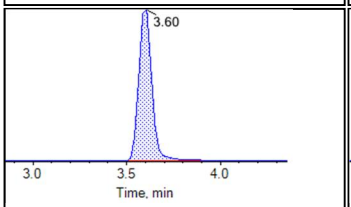
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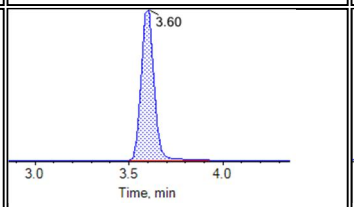
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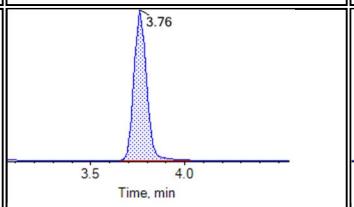
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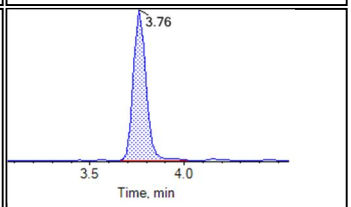
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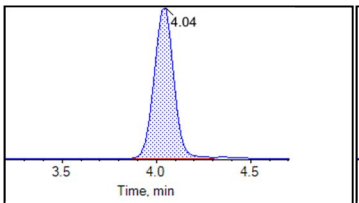


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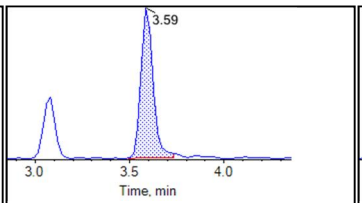


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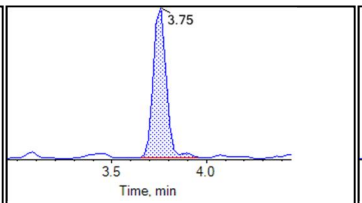
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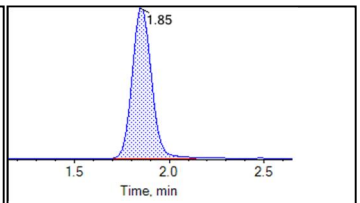
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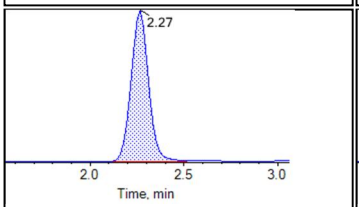
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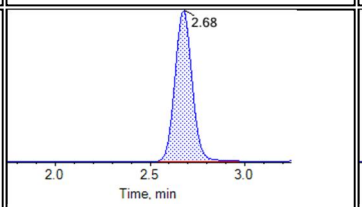
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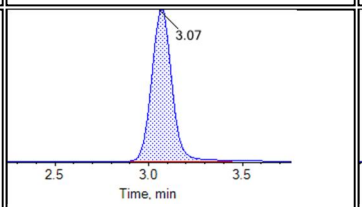
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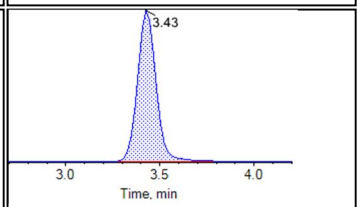
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13C8-PFOA



13C9-PFNA

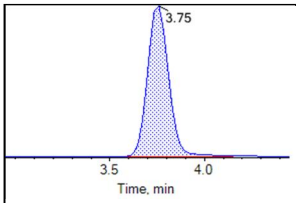


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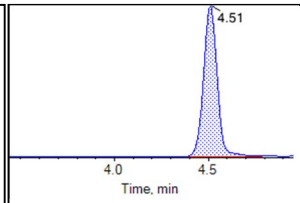
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Chromatogram Report

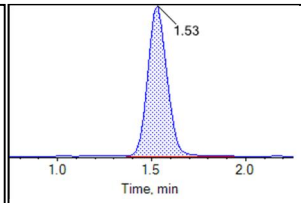
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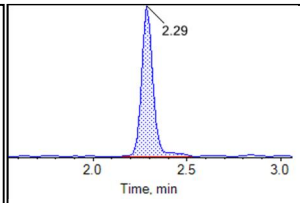
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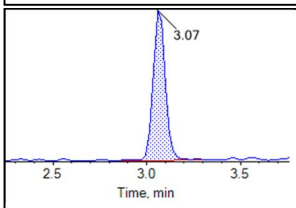
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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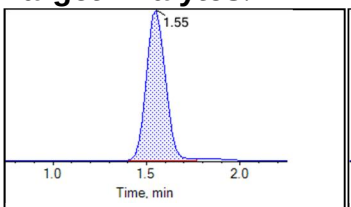
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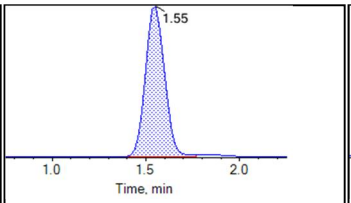
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Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:30:11	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

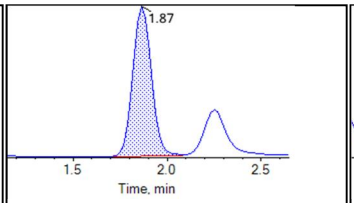
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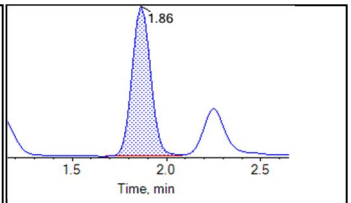
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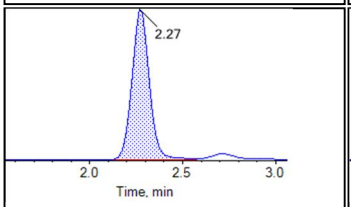
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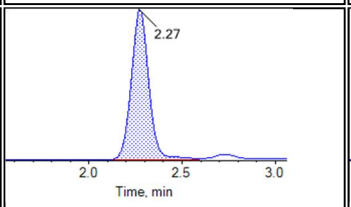
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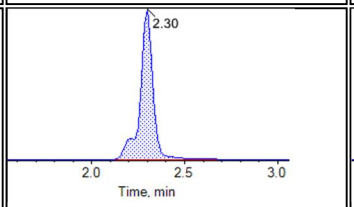
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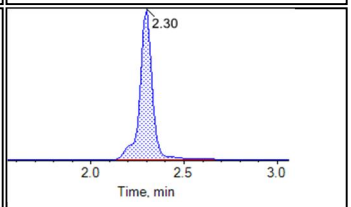
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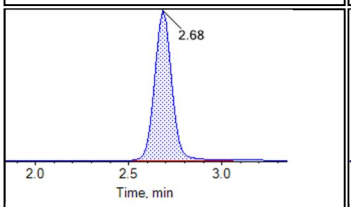
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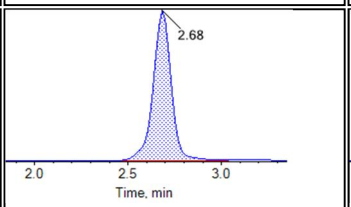
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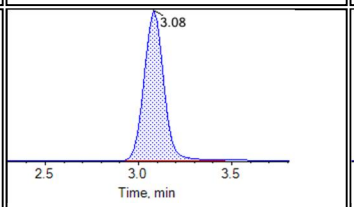
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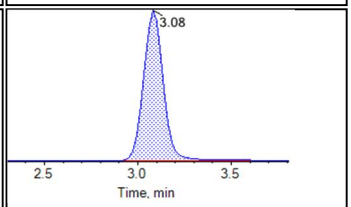
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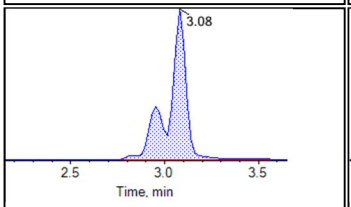
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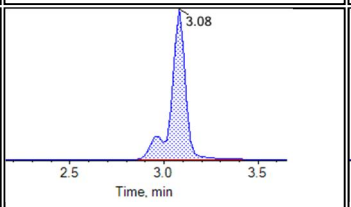
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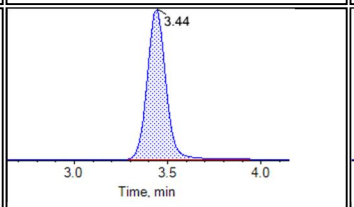
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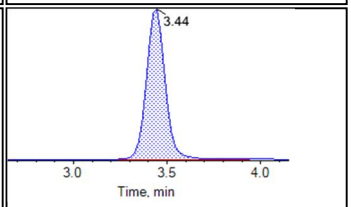
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PFOS_2



PFDA_1

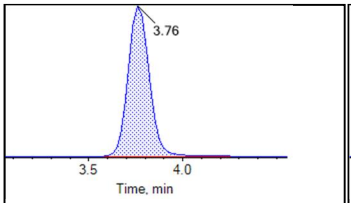


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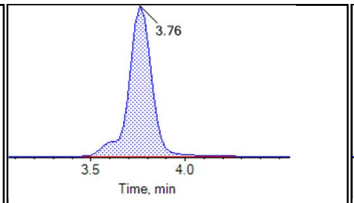
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Chromatogram Report

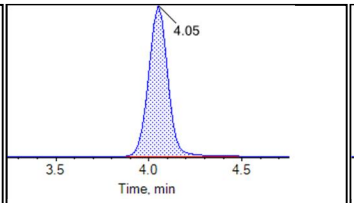
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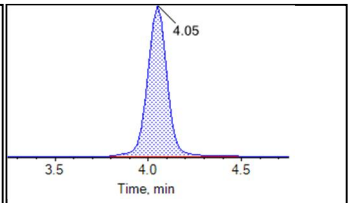
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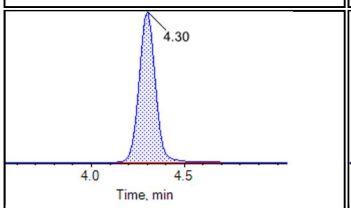
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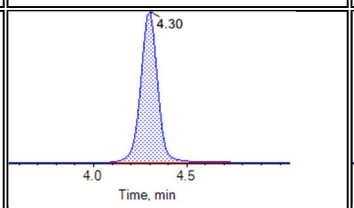
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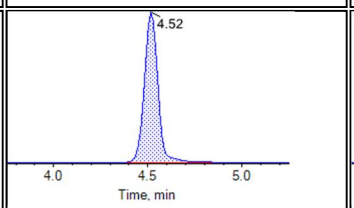
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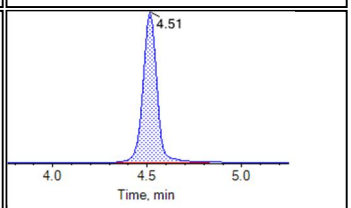
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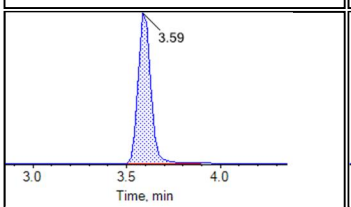
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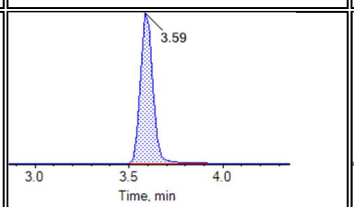
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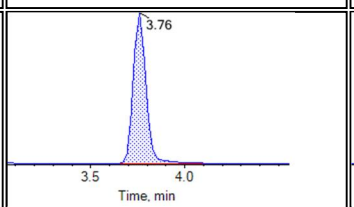
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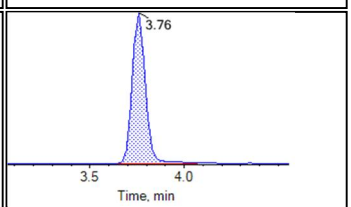
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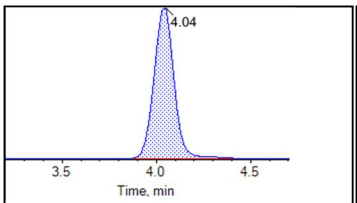


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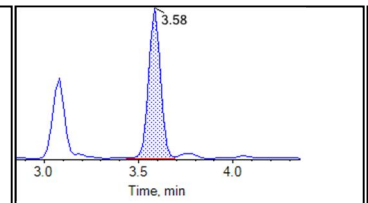


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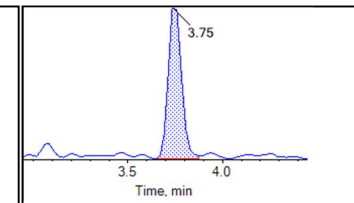
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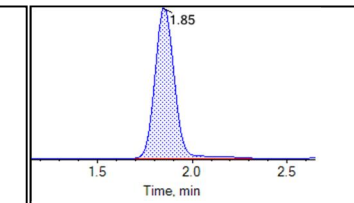
13C2-PFDoA



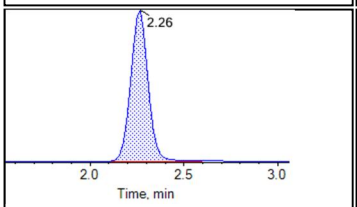
d3-MeFOSAA



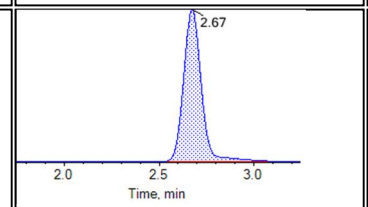
d5-EtFOSAA



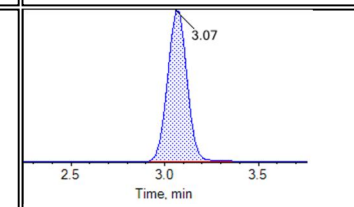
13C5-PFHxA



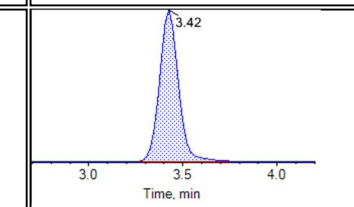
13C4-PFHpA



13C8-PFOA



13C9-PFNA

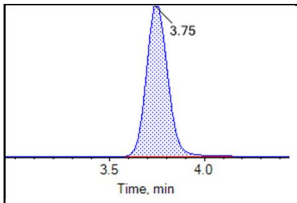


13C6-PFDA

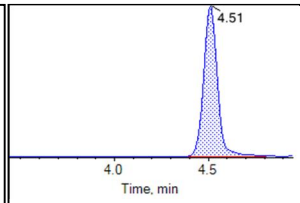
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Chromatogram Report

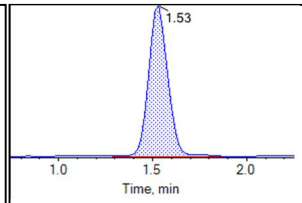
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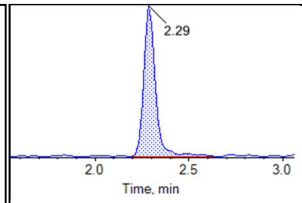
13C7-PFUnA



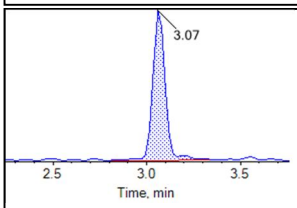
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

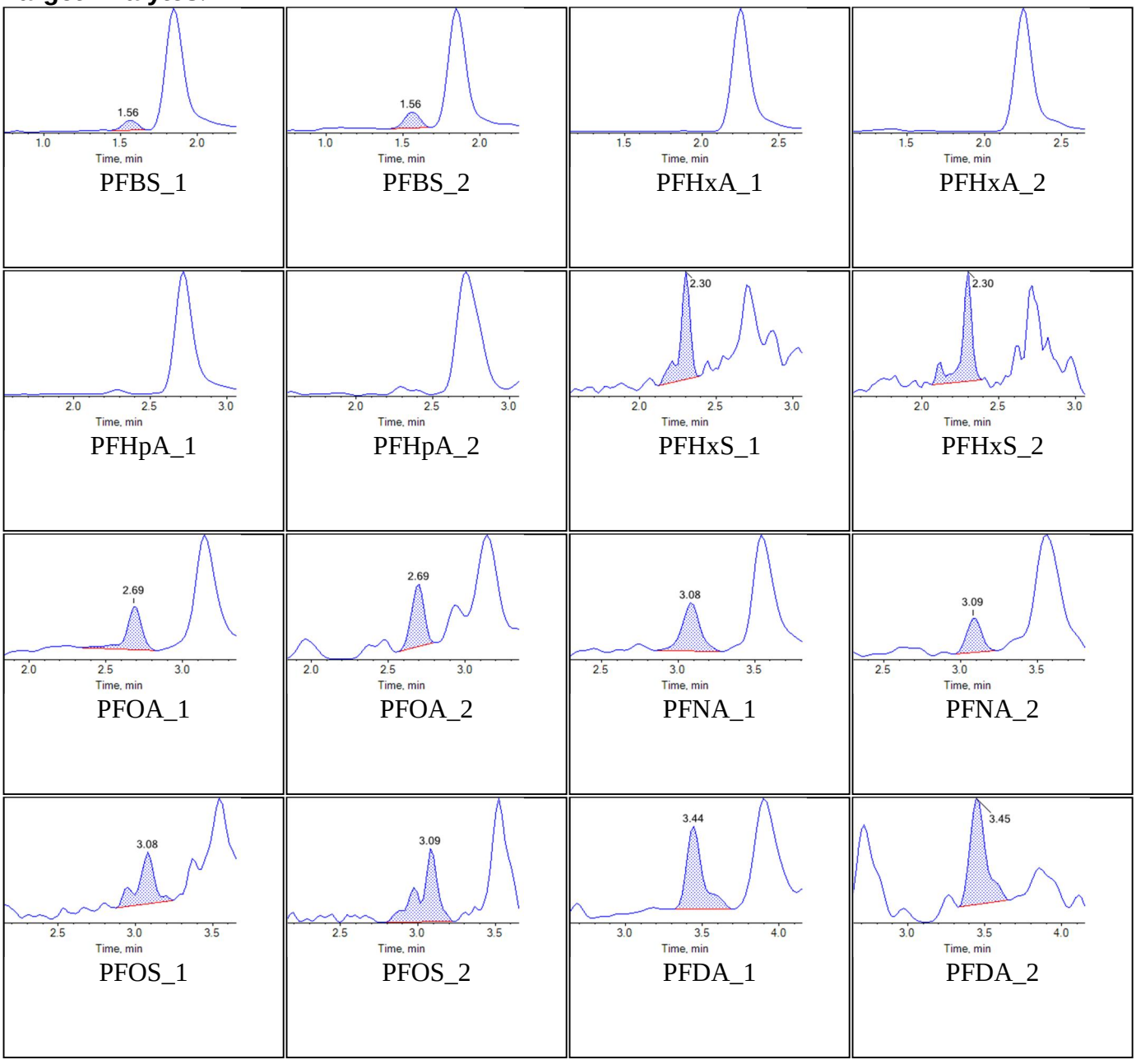
Chromatogram Report

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Printed: 17/10/2018 12:19:40 PM

Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:41:02	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

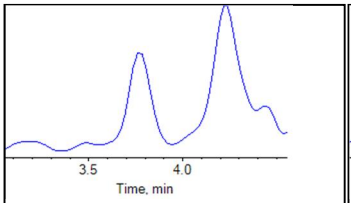
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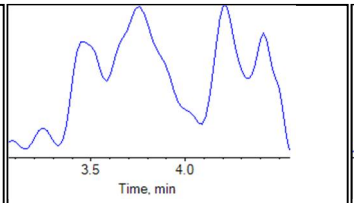
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Chromatogram Report

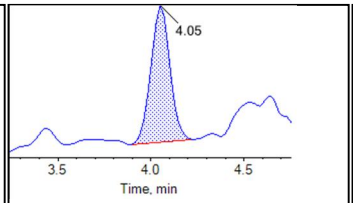
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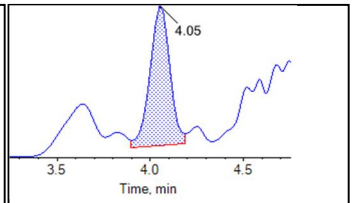
PFUnA_1



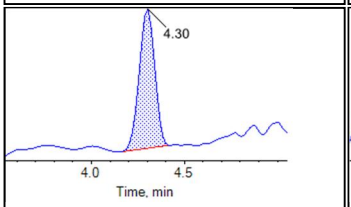
PFUnA_2



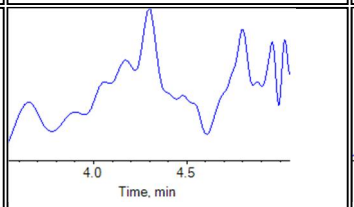
PFDoA_1



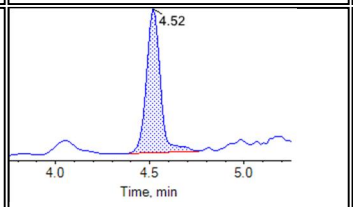
PFDoA_2



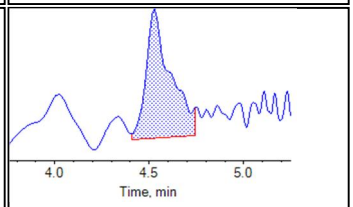
PFTrDA_1



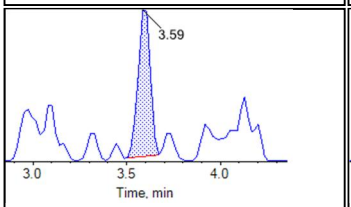
PFTrDA_2



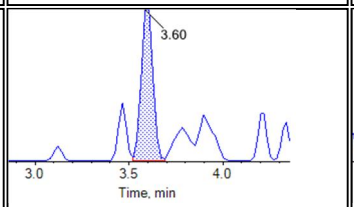
PFTeDA_1



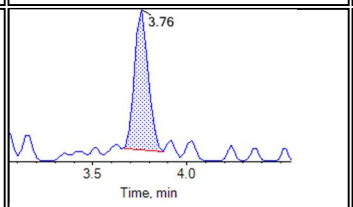
PFTeDA_2



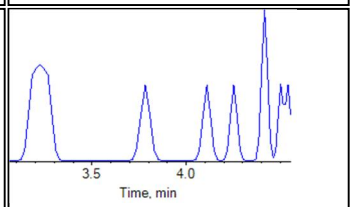
NMeFOSAA_1



NMeFOSAA_2

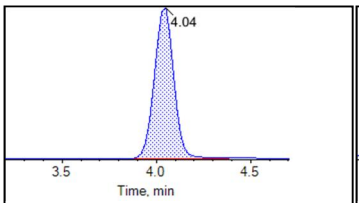


NEtFOSAA_1

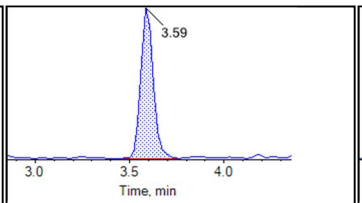


NEtFOSAA_2

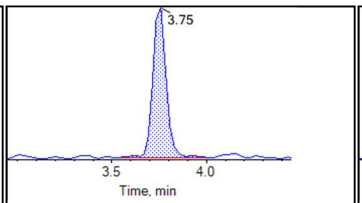
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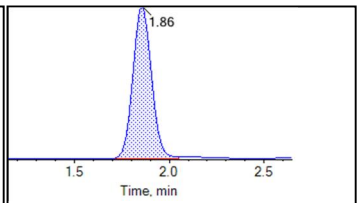
13C2-PFDoA



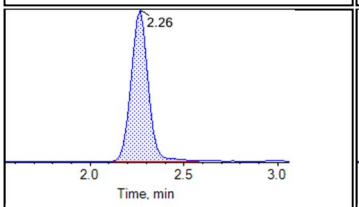
d3-MeFOSAA



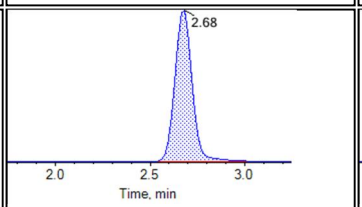
d5-EtFOSAA



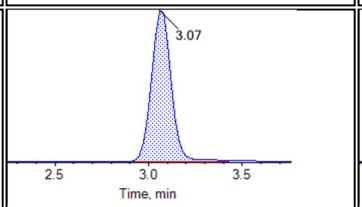
13C5-PFHxA



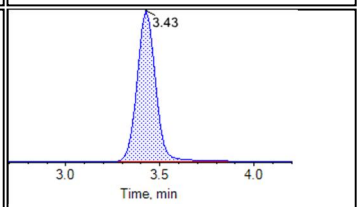
13C4-PFHpA



13C8-PFOA



13C9-PFNA

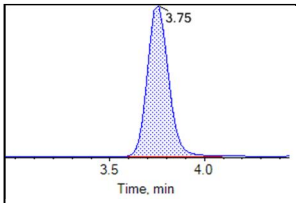


13C6-PFDA

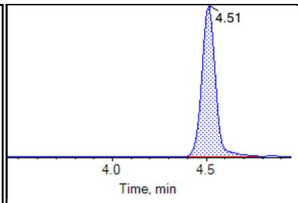
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Chromatogram Report

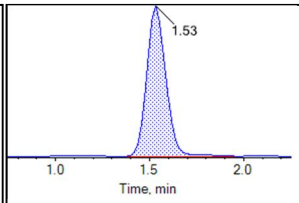
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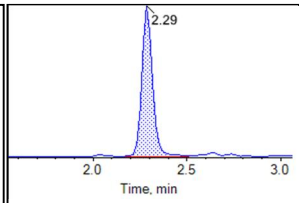
13C7-PFUnA



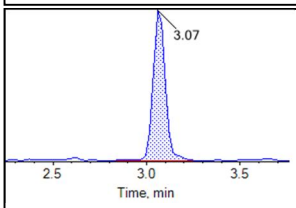
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

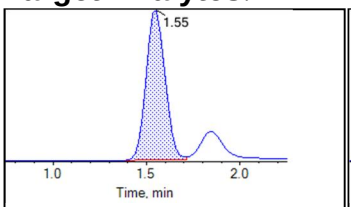
Chromatogram Report

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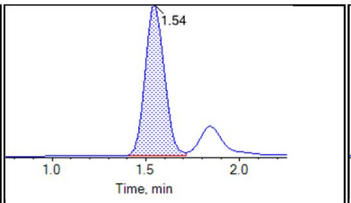
Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

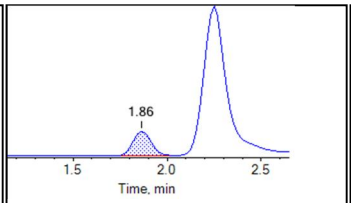
Target Analytes:



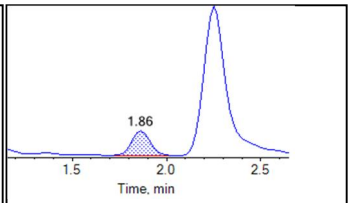
PFBS_1



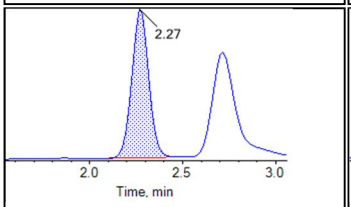
PFBS_2



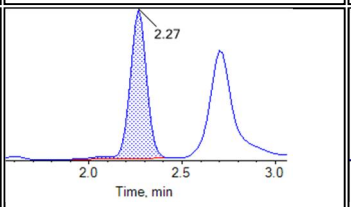
PFHxA_1



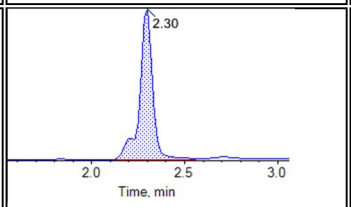
PFHxA_2



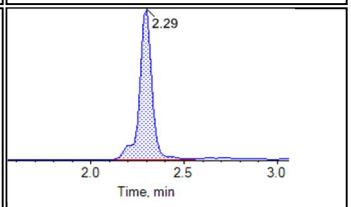
PFHpA_1



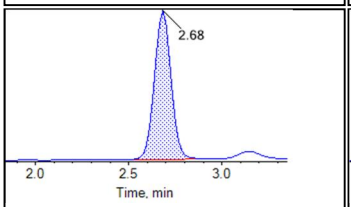
PFHpA_2



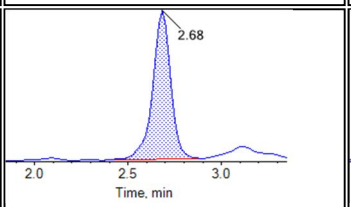
PFHxS_1



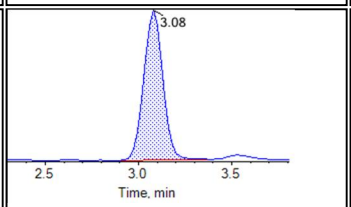
PFHxS_2



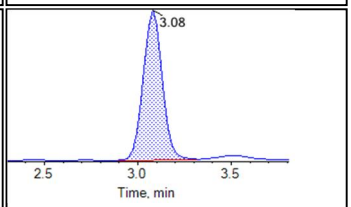
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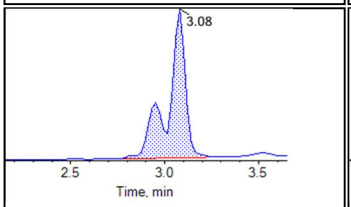
PFOA_2



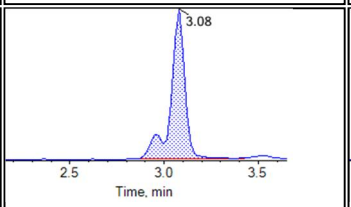
PFNA_1



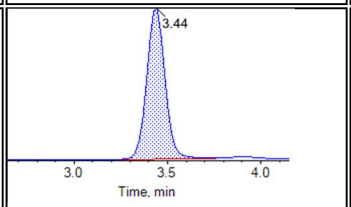
PFNA_2



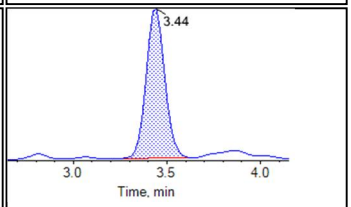
PFOS_1



PFOS_2



PFDA_1

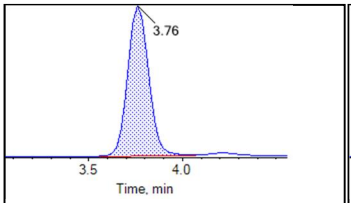


PFDA_2

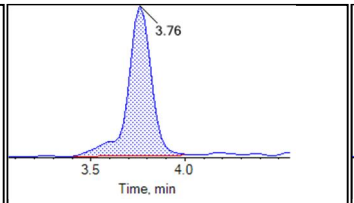
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Chromatogram Report

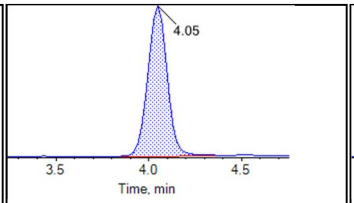
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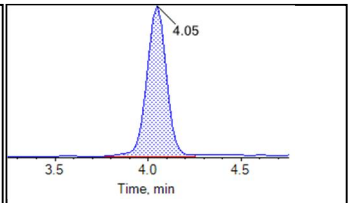
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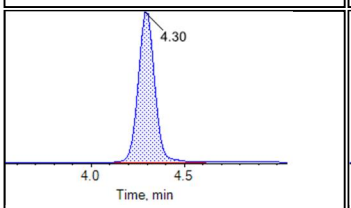
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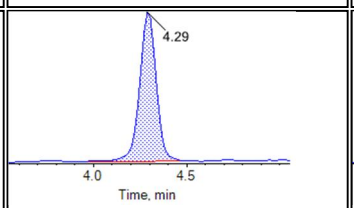
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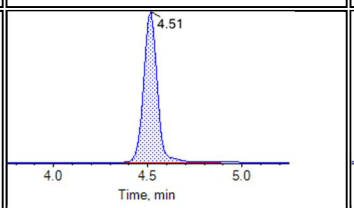
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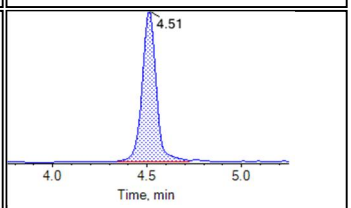
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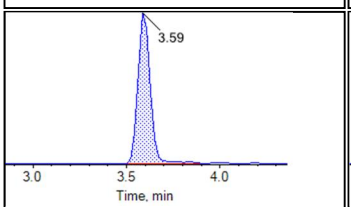
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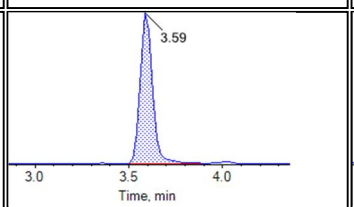
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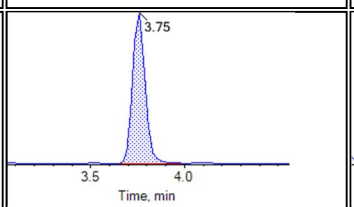
PFTeDA_2



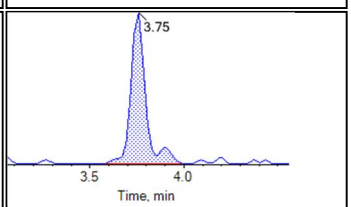
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NMeFOSAA_2

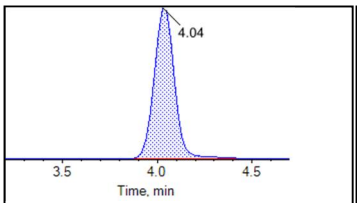


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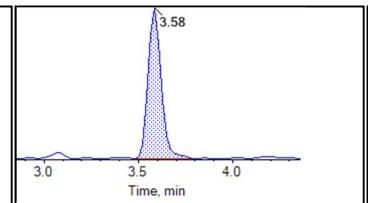


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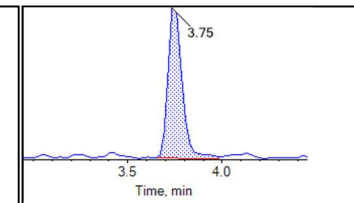
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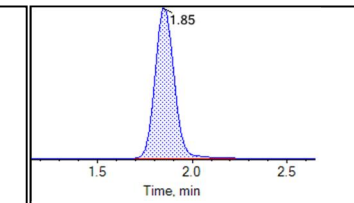
13C2-PFDoA



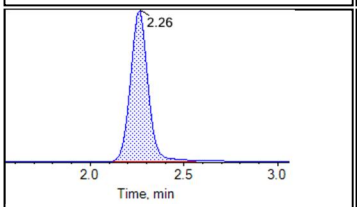
d3-MeFOSAA



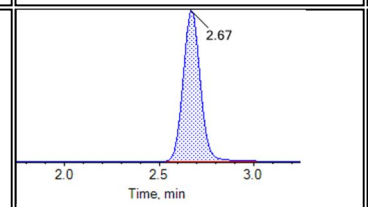
d5-EtFOSAA



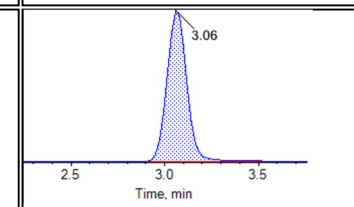
13C5-PFHxA



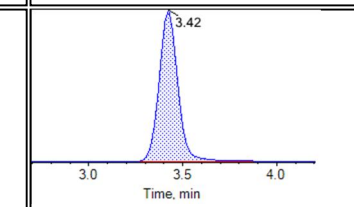
13C4-PFHpA



13C8-PFOA



13C9-PFNA

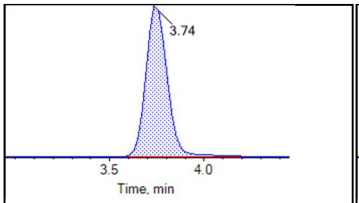


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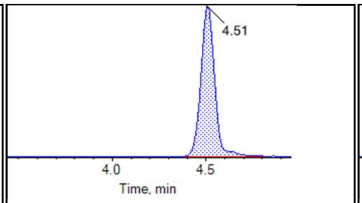
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Chromatogram Report

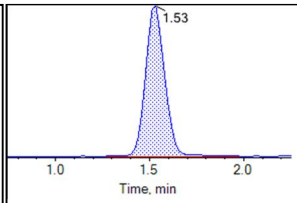
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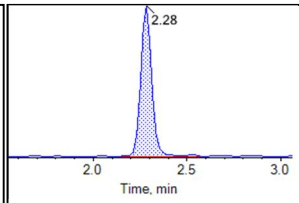
13C7-PFUnA



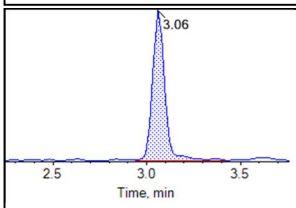
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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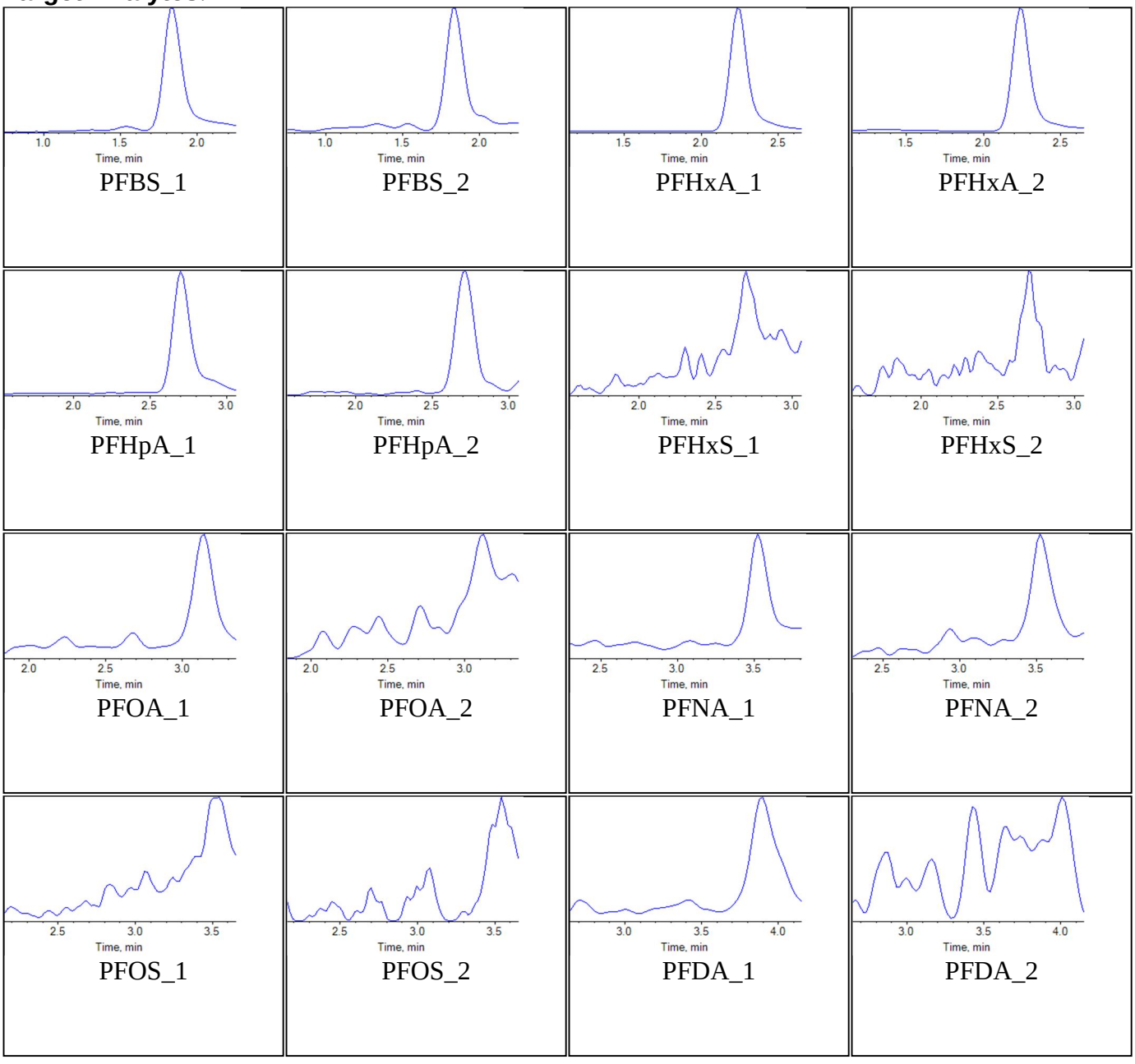
Chromatogram Report

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Printed: 17/10/2018 12:20:02 PM

Sample Name	CR894PB-FS(3)	**Injection Vial**	25
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:24:29	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

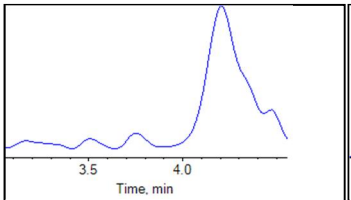
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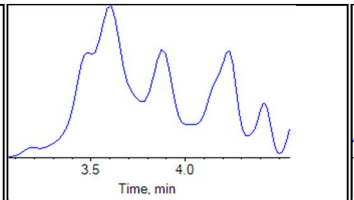
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Chromatogram Report

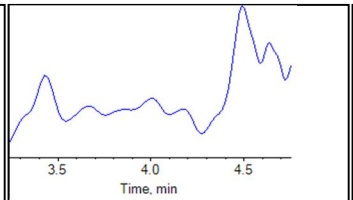
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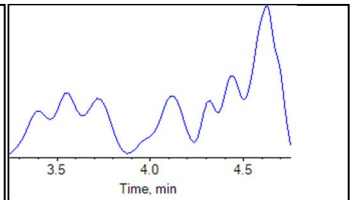
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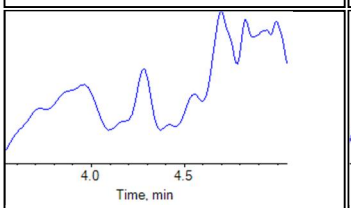
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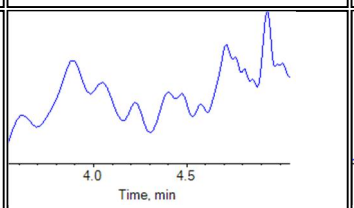
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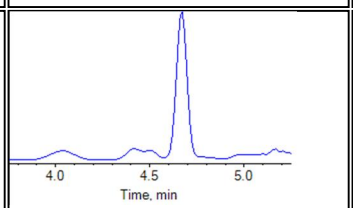
PFDoA_2



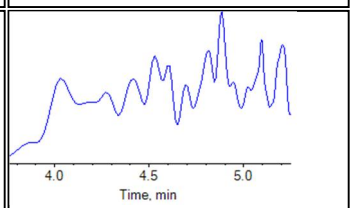
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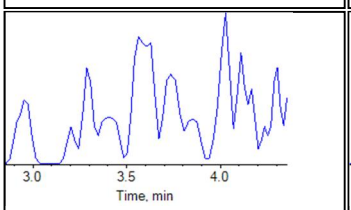
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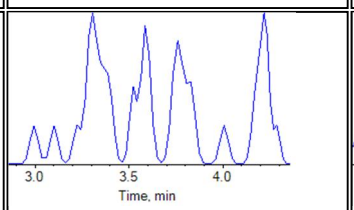
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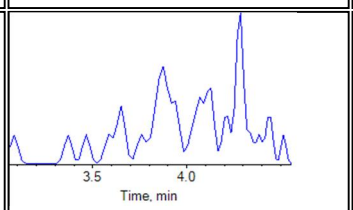
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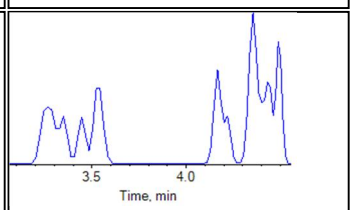
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NMeFOSAA_2

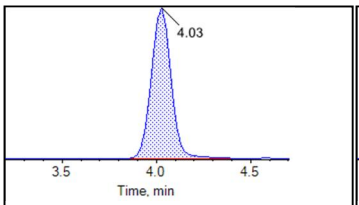


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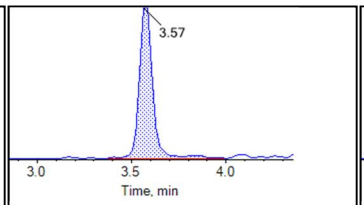


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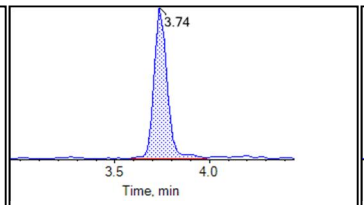
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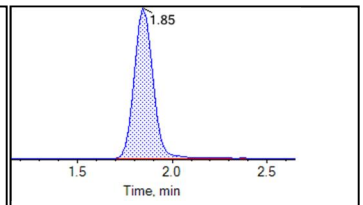
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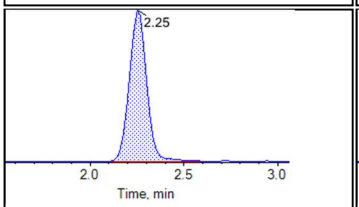
d3-MeFOSAA



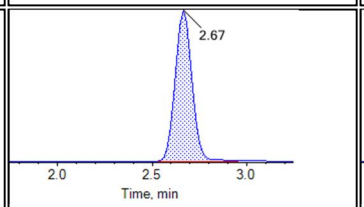
d5-EtFOSAA



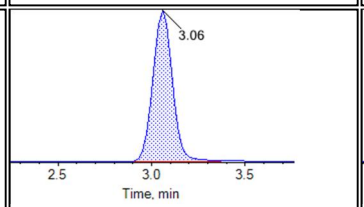
13C5-PFHxA



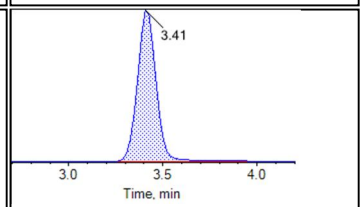
13C4-PFHpA



13C8-PFOA



13C9-PFNA

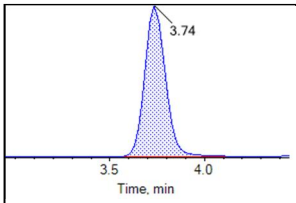


13C6-PFDA

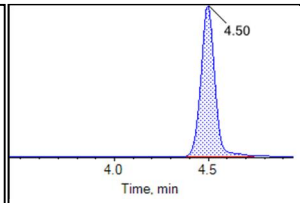
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Chromatogram Report

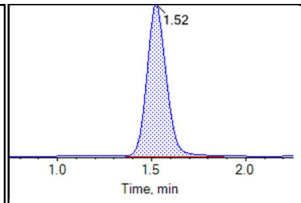
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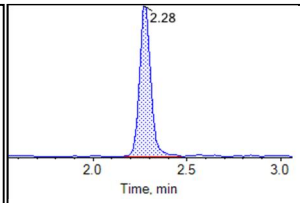
13C7-PFUnA



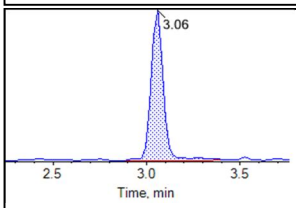
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

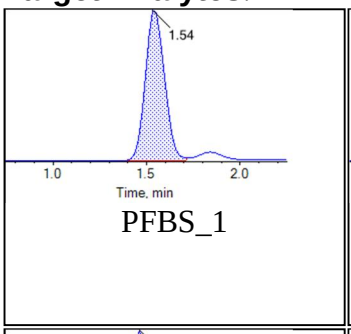
Chromatogram Report

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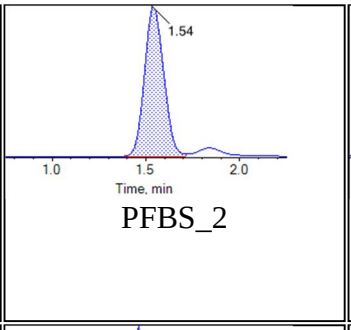
Sample Name	CR895LCS-FS(3)	**Injection Vial**	26
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:35:21	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

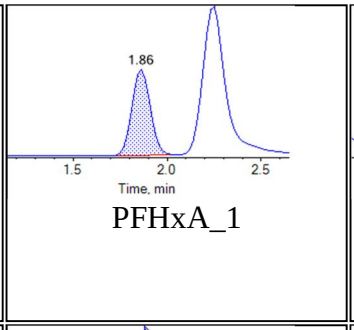
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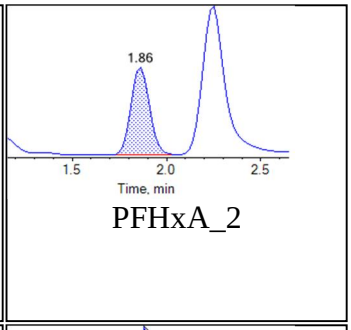
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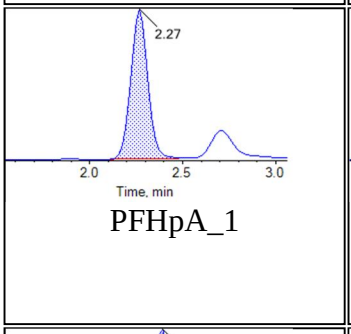
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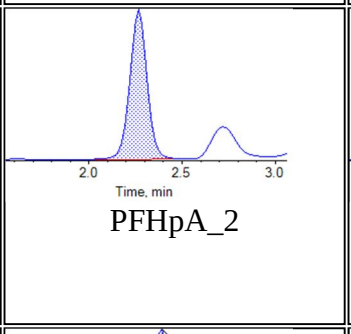
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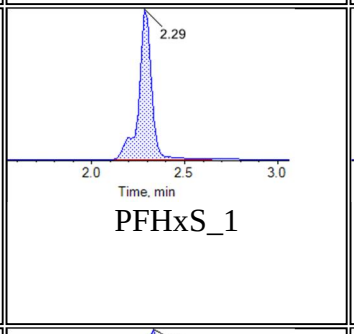
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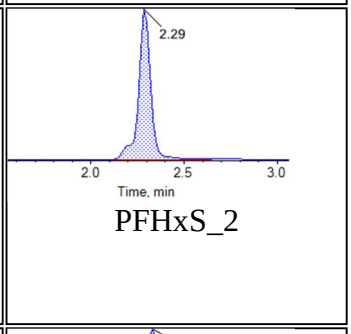
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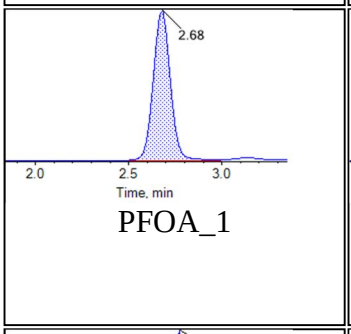
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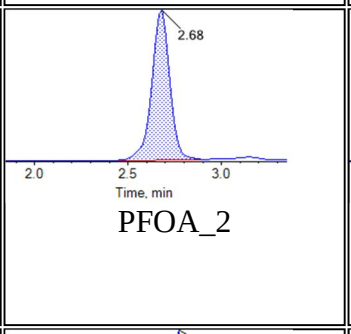
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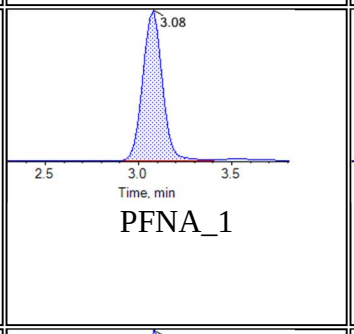
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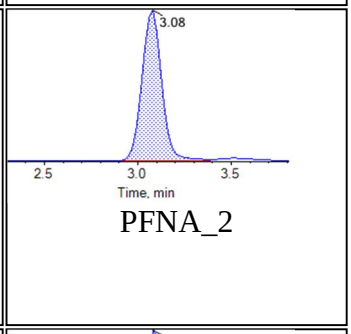
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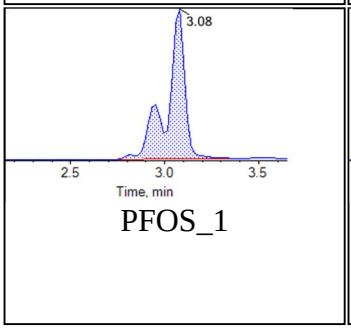
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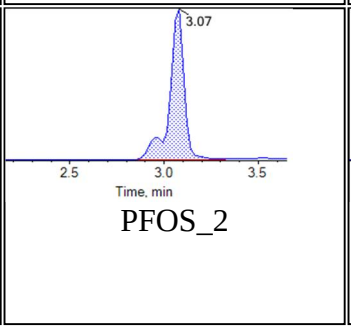
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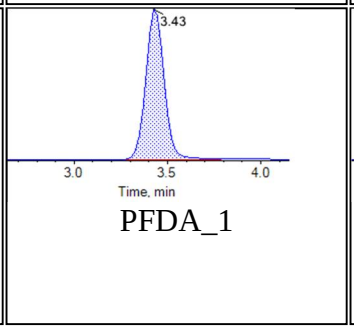
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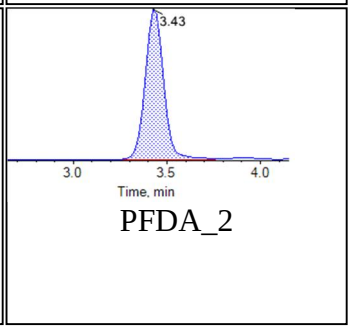
PFOS_1



PFOS_2



PFDA_1

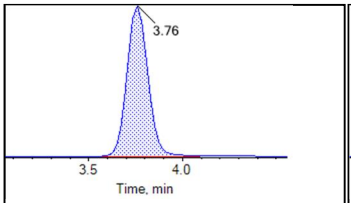


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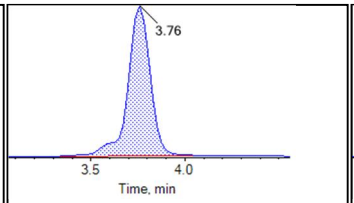
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Chromatogram Report

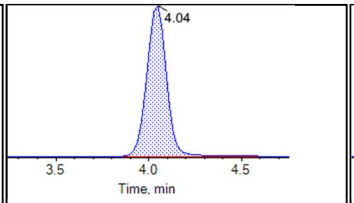
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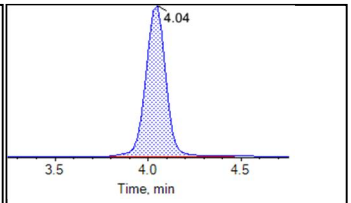
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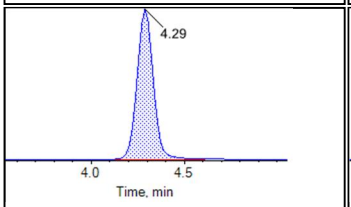
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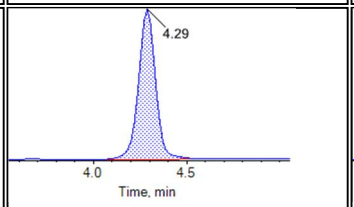
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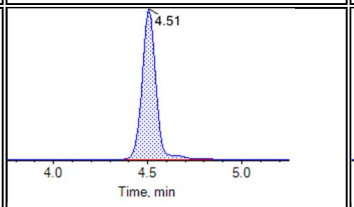
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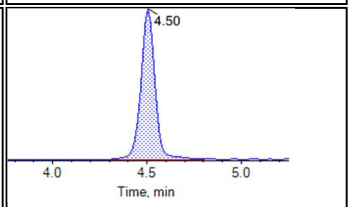
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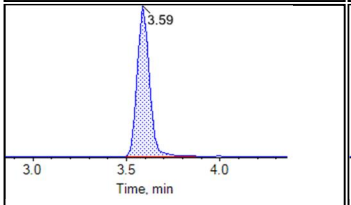
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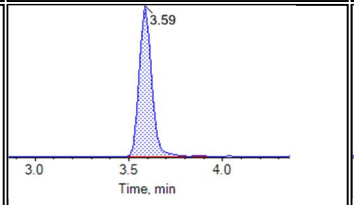
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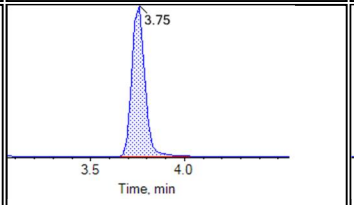
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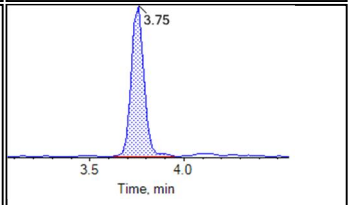
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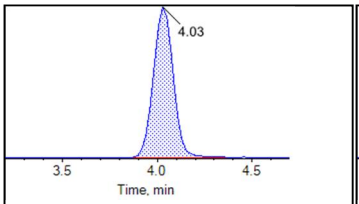


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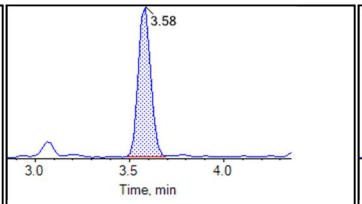


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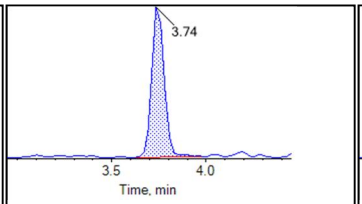
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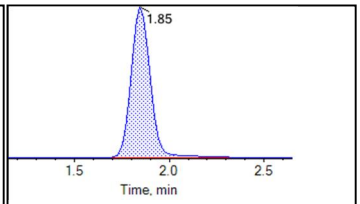
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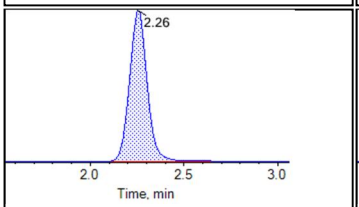
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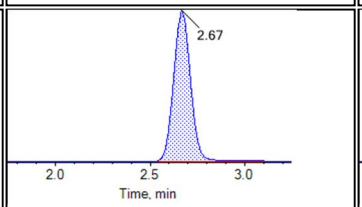
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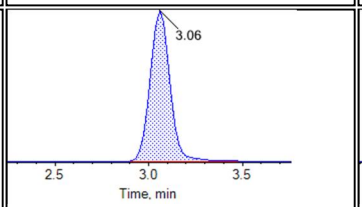
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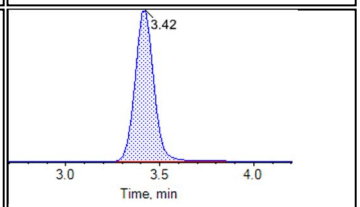
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13C8-PFOA



13C9-PFNA

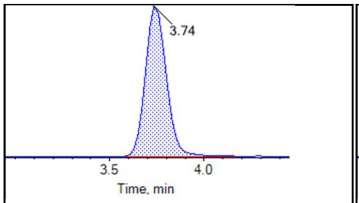


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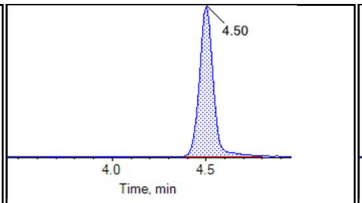
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Chromatogram Report

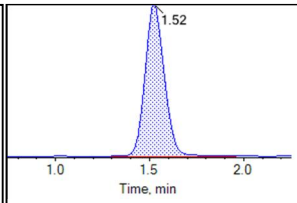
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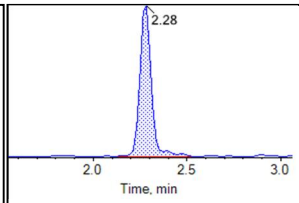
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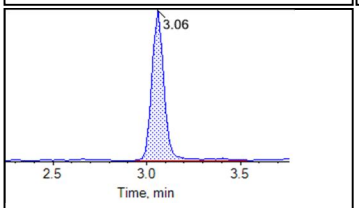
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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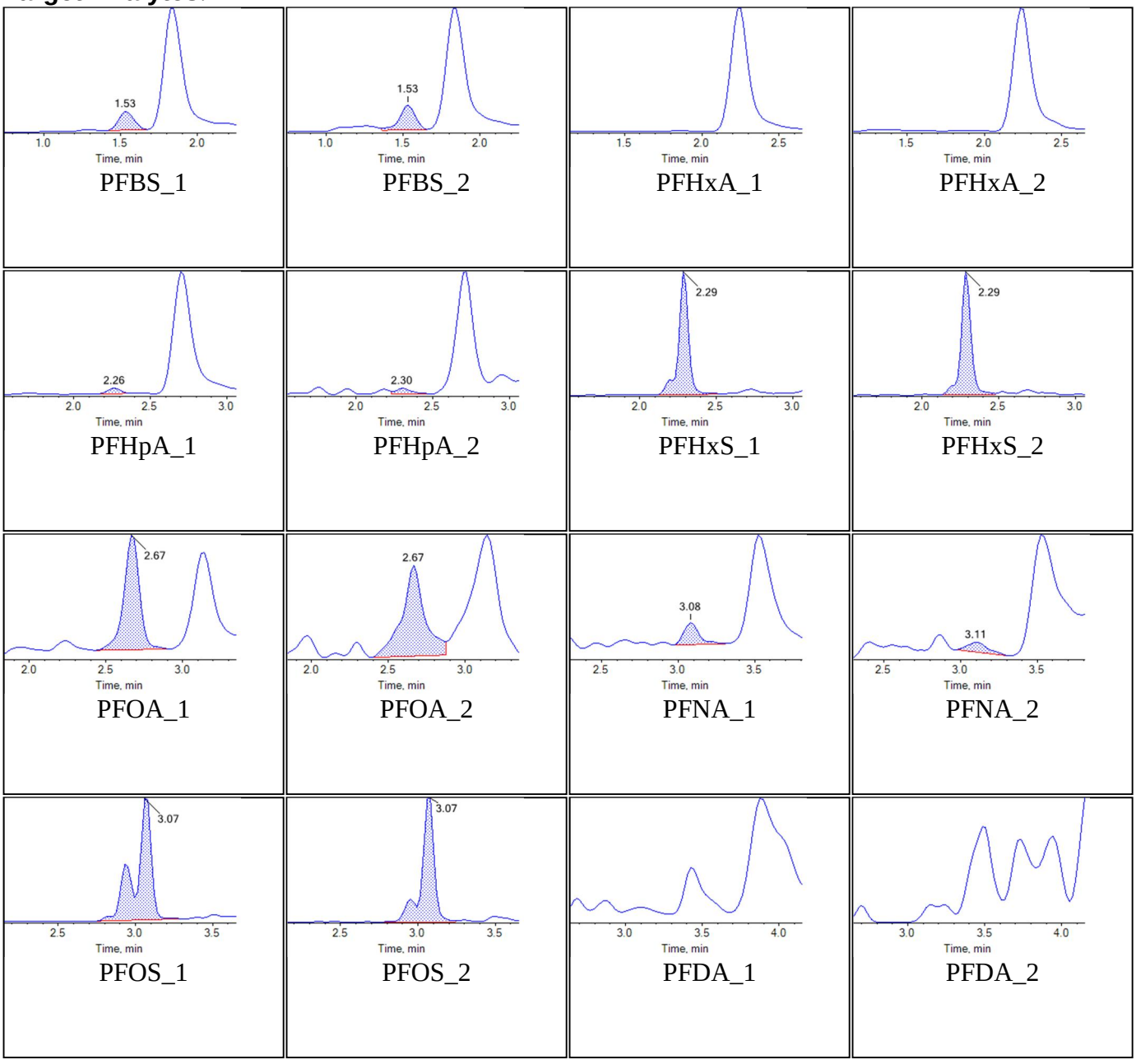
Chromatogram Report

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Sample Name	J8381-FS(3)	**Injection Vial**	27
Sample ID	VC-PM64B-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:46:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

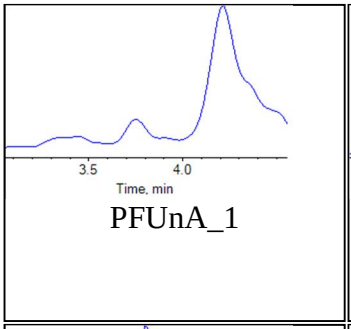
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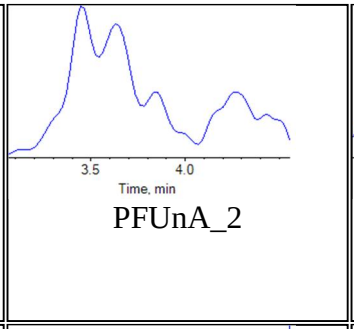
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Chromatogram Report

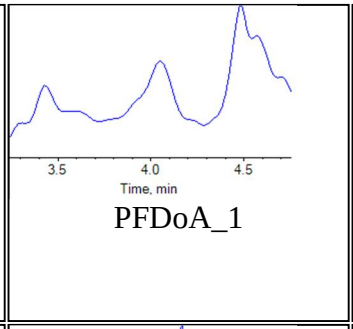
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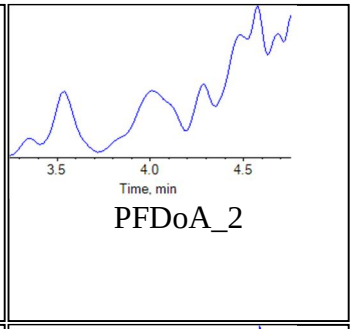
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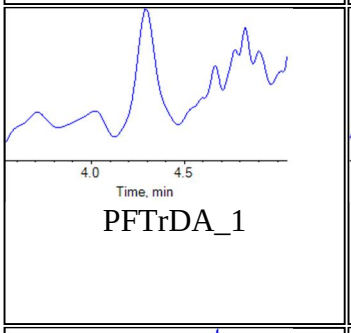
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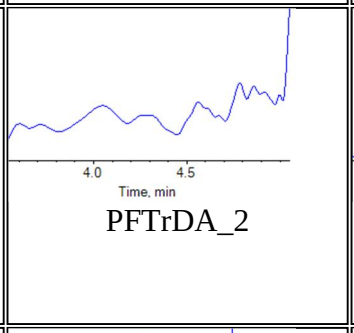
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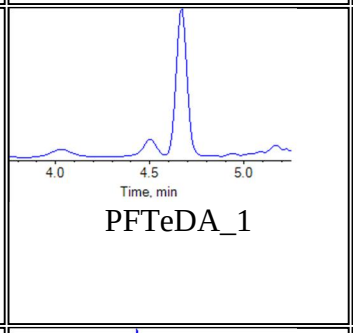
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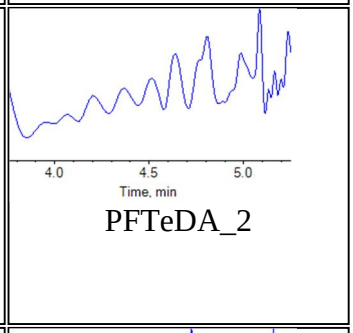
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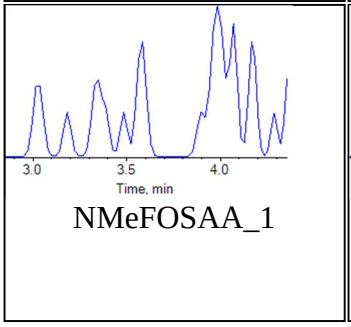
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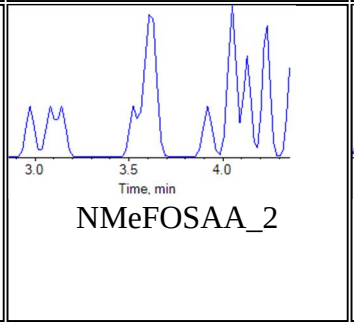
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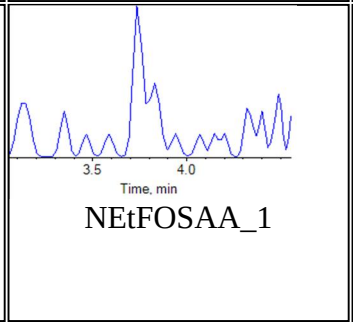
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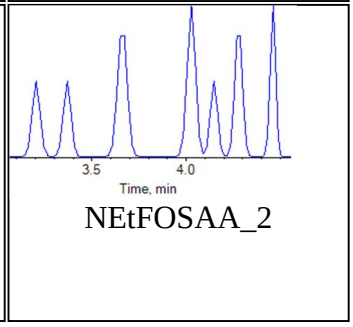
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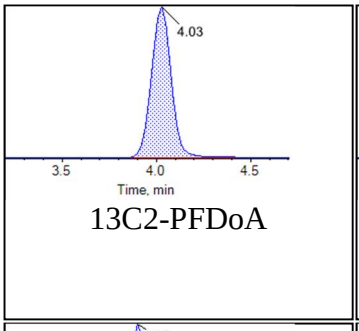


NEtFOSAA_1

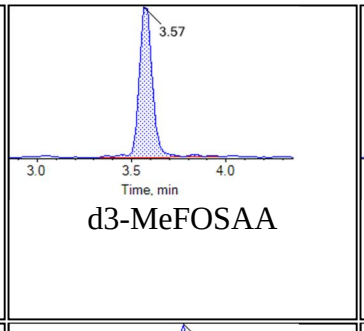


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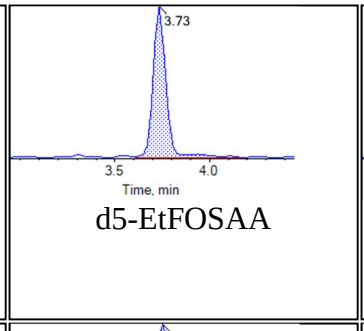
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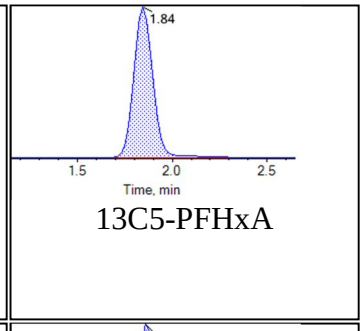
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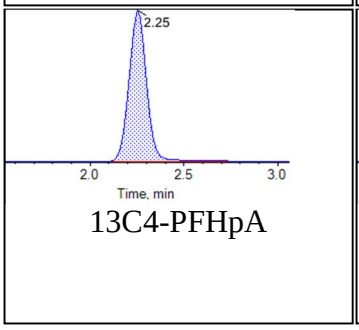
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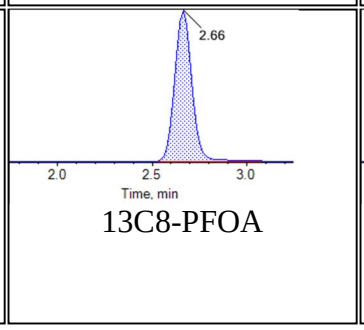
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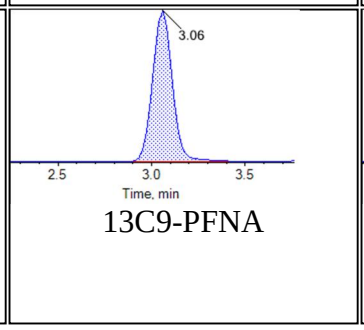
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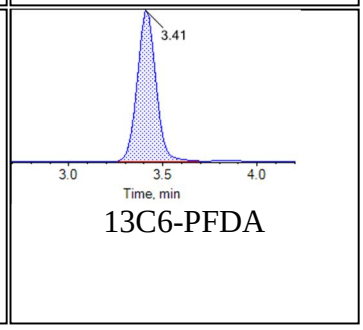
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13C8-PFOA



13C9-PFNA

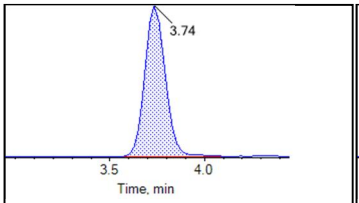


13C6-PFDA

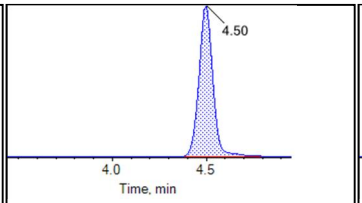
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Chromatogram Report

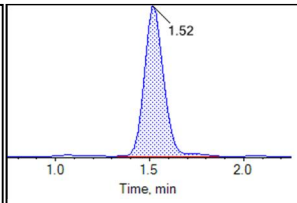
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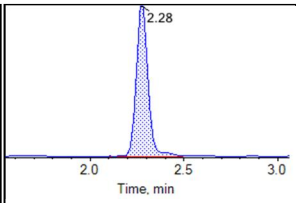
13C7-PFUnA



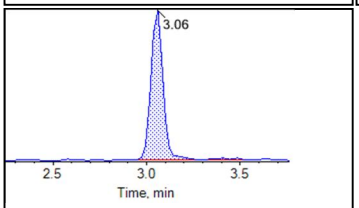
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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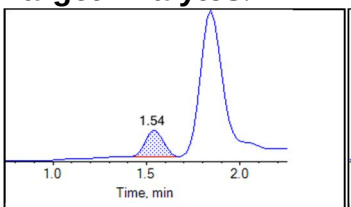
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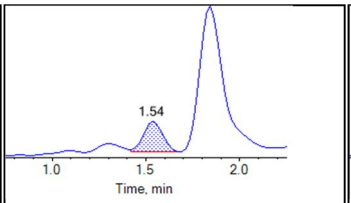
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Sample ID	VC-HS09-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:57:04	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

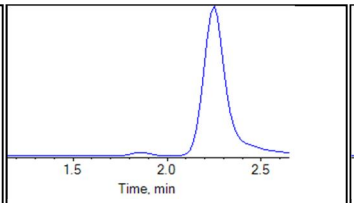
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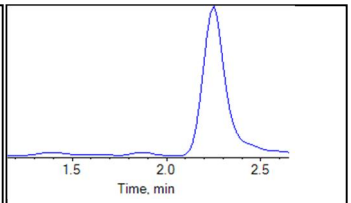
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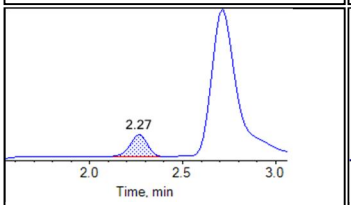
PFBS_2



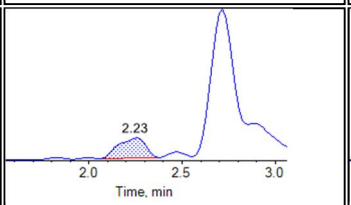
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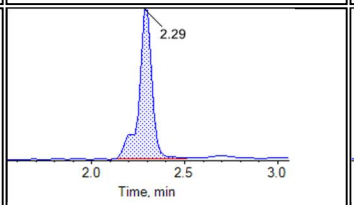
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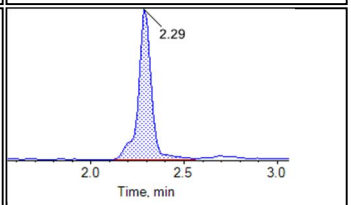
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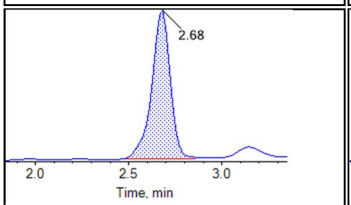
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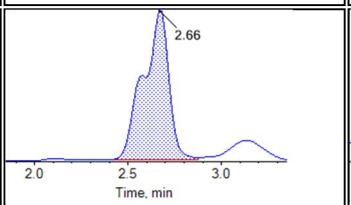
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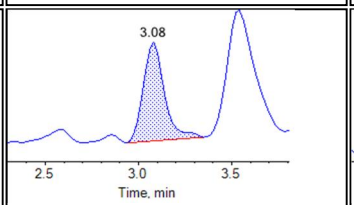
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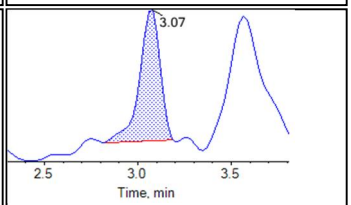
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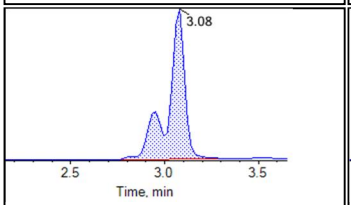
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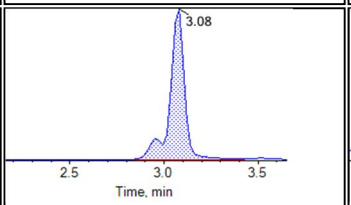
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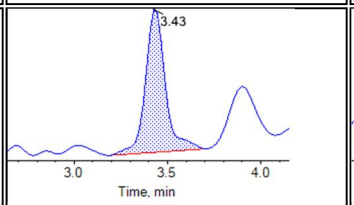
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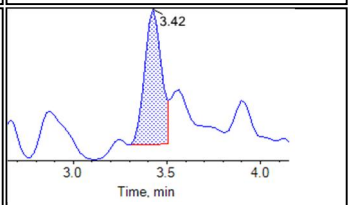
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PFOS_2



PFDA_1

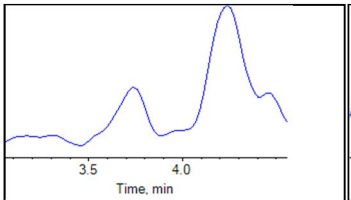


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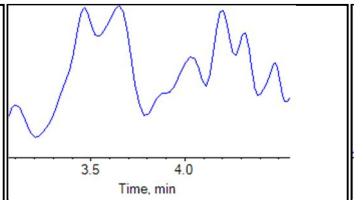
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Chromatogram Report

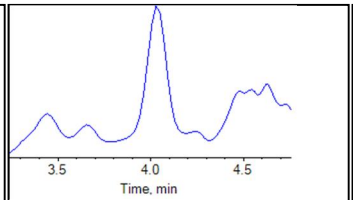
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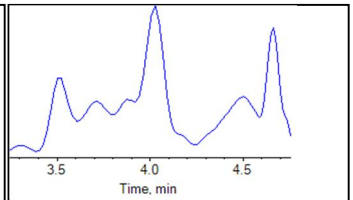
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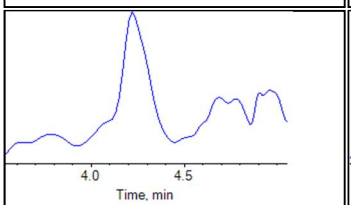
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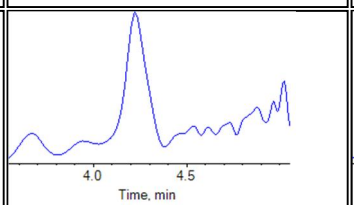
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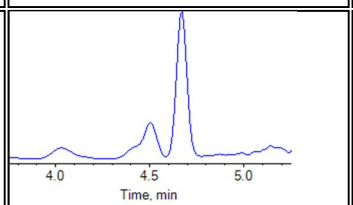
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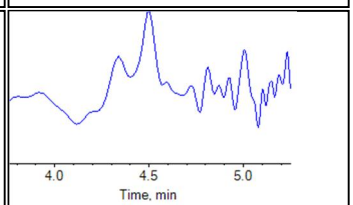
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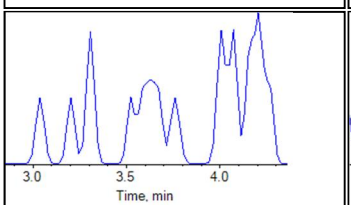
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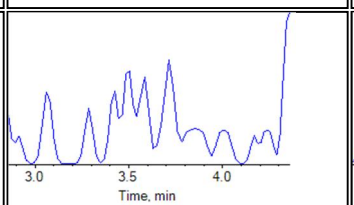
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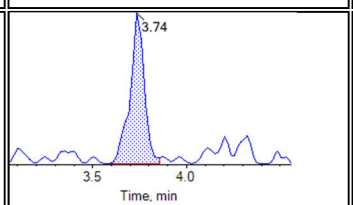
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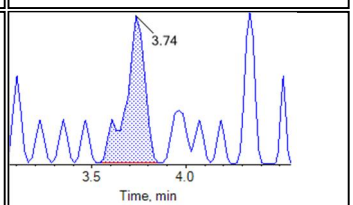
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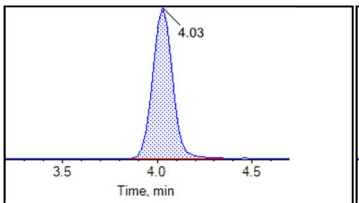


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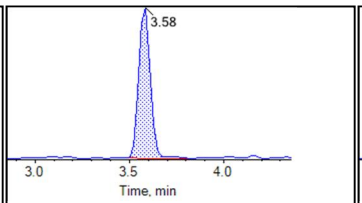


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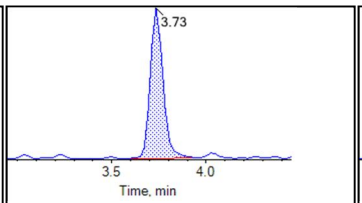
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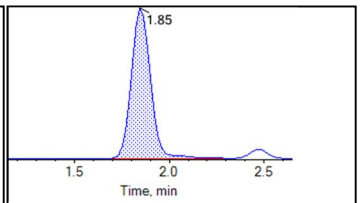
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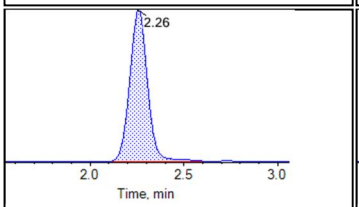
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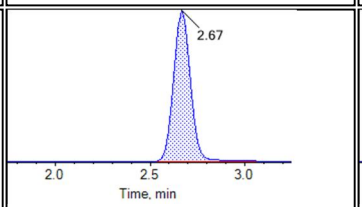
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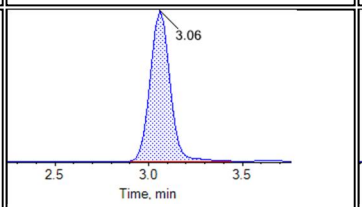
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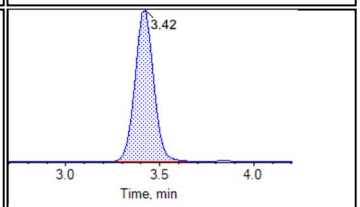
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13C8-PFOA



13C9-PFNA

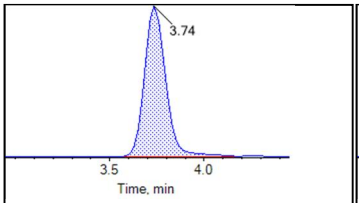


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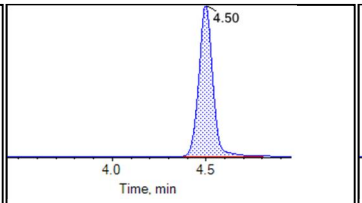
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Chromatogram Report

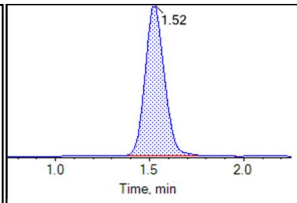
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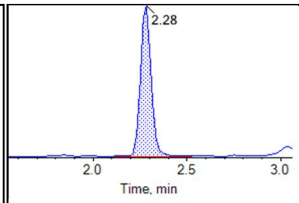
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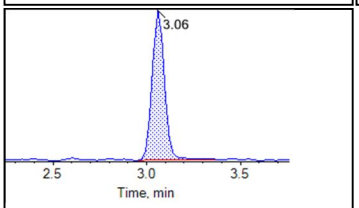
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

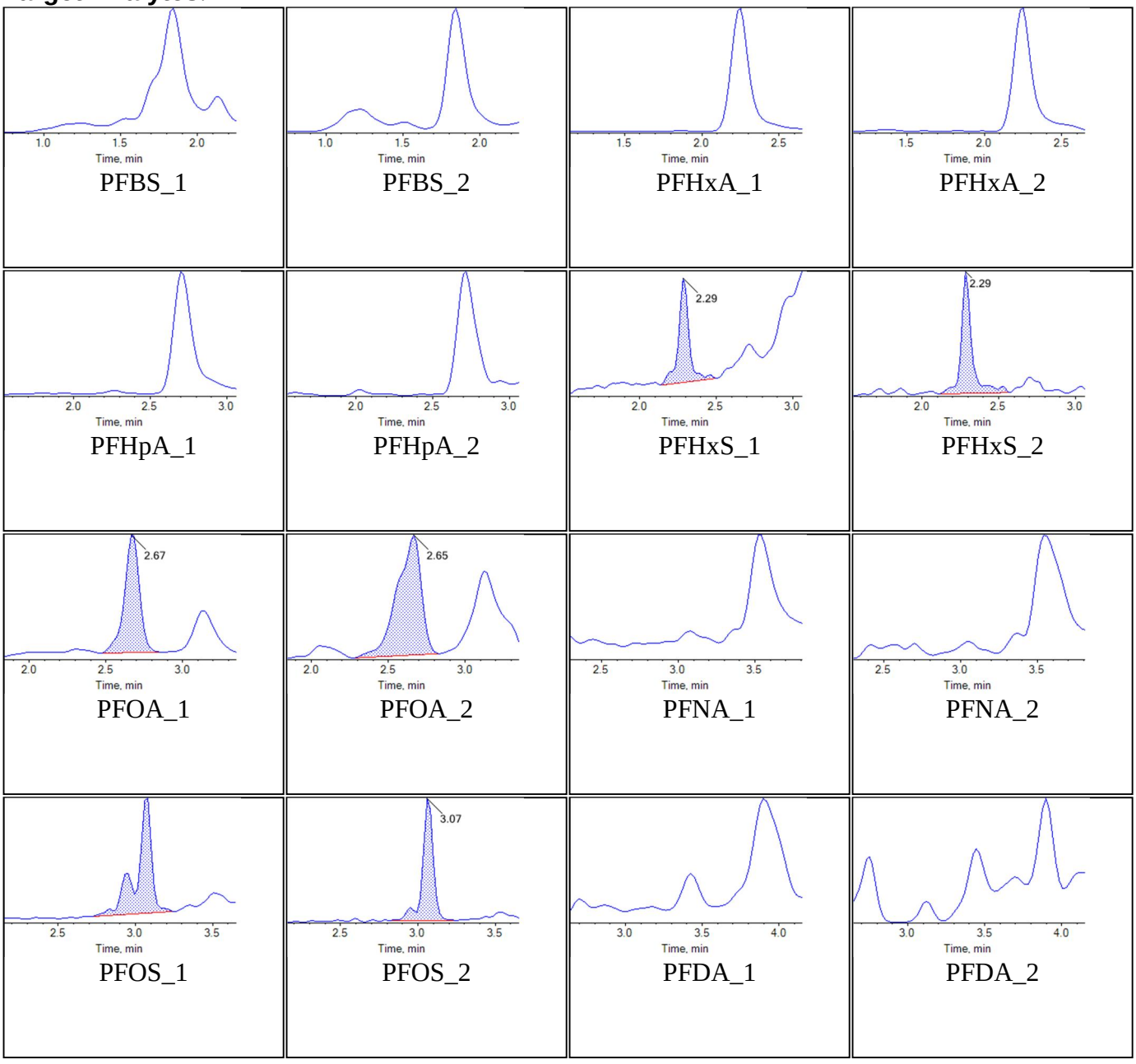
Chromatogram Report

Created with Analyst Reporter
Printed: 17/10/2018 12:20:24 PM

Sample Name	J8387-FS(3)	**Injection Vial**	29
Sample ID	VC-HS09-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:07:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

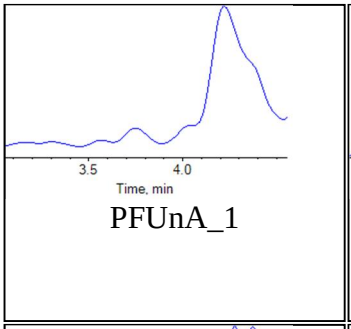
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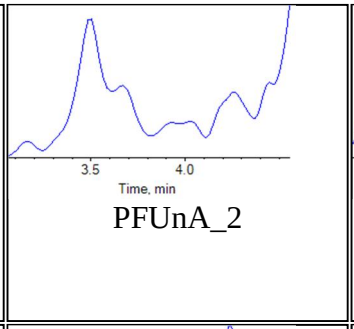
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Chromatogram Report

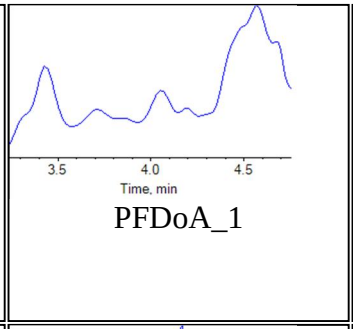
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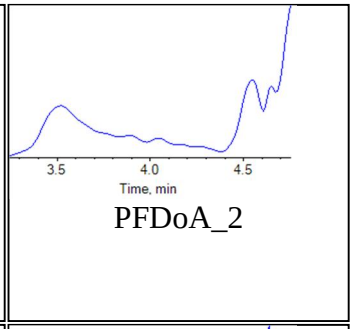
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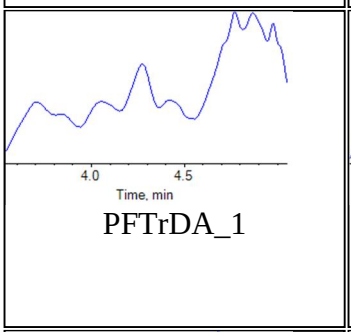
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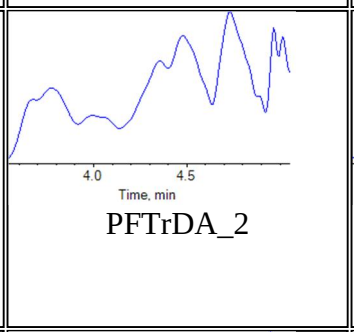
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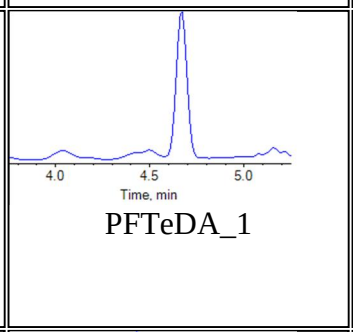
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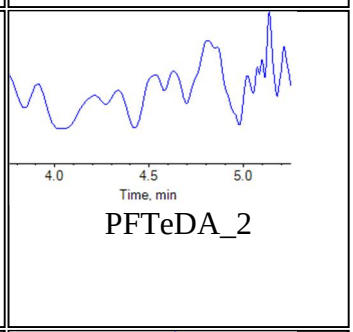
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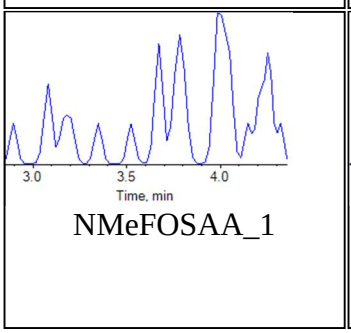
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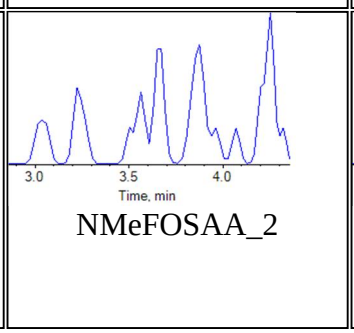
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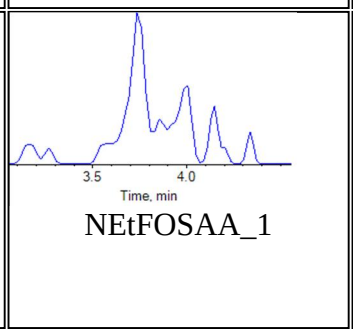
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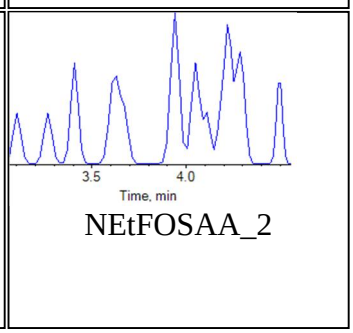
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NMeFOSAA_2

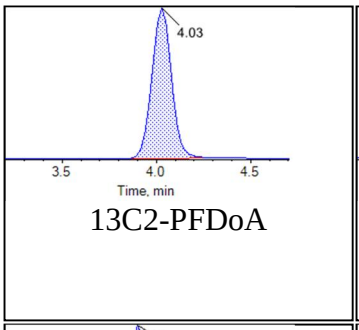


NEtFOSAA_1

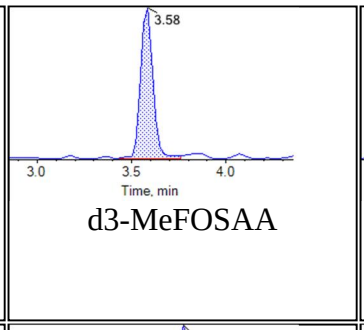


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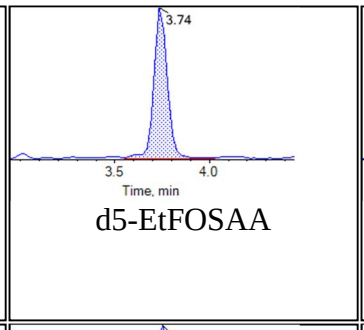
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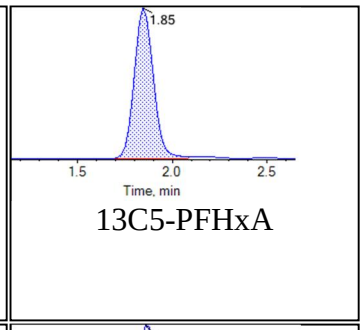
13C2-PFDoA



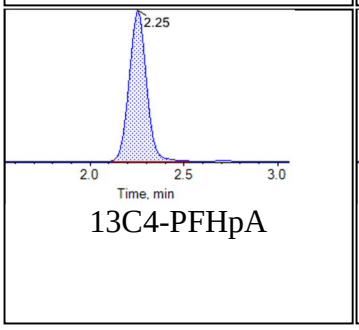
d3-MeFOSAA



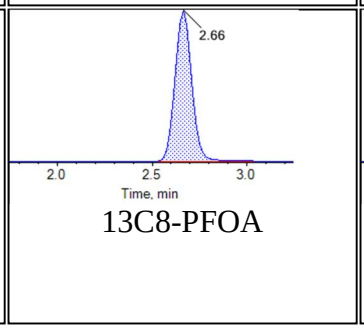
d5-EtFOSAA



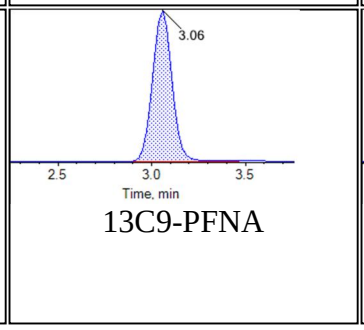
13C5-PFHxA



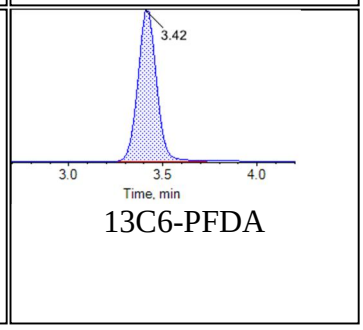
13C4-PFHpA



13C8-PFOA



13C9-PFNA

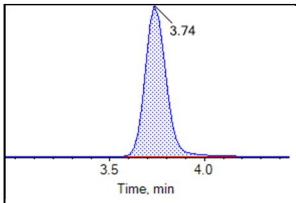


13C6-PFDA

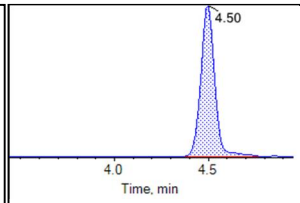
BATTELLE

Chromatogram Report

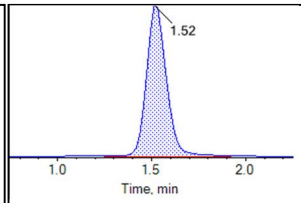
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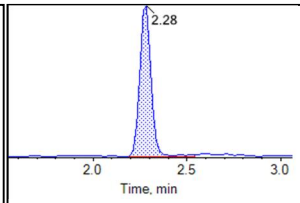
13C7-PFUnA



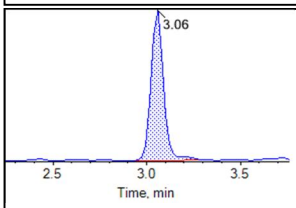
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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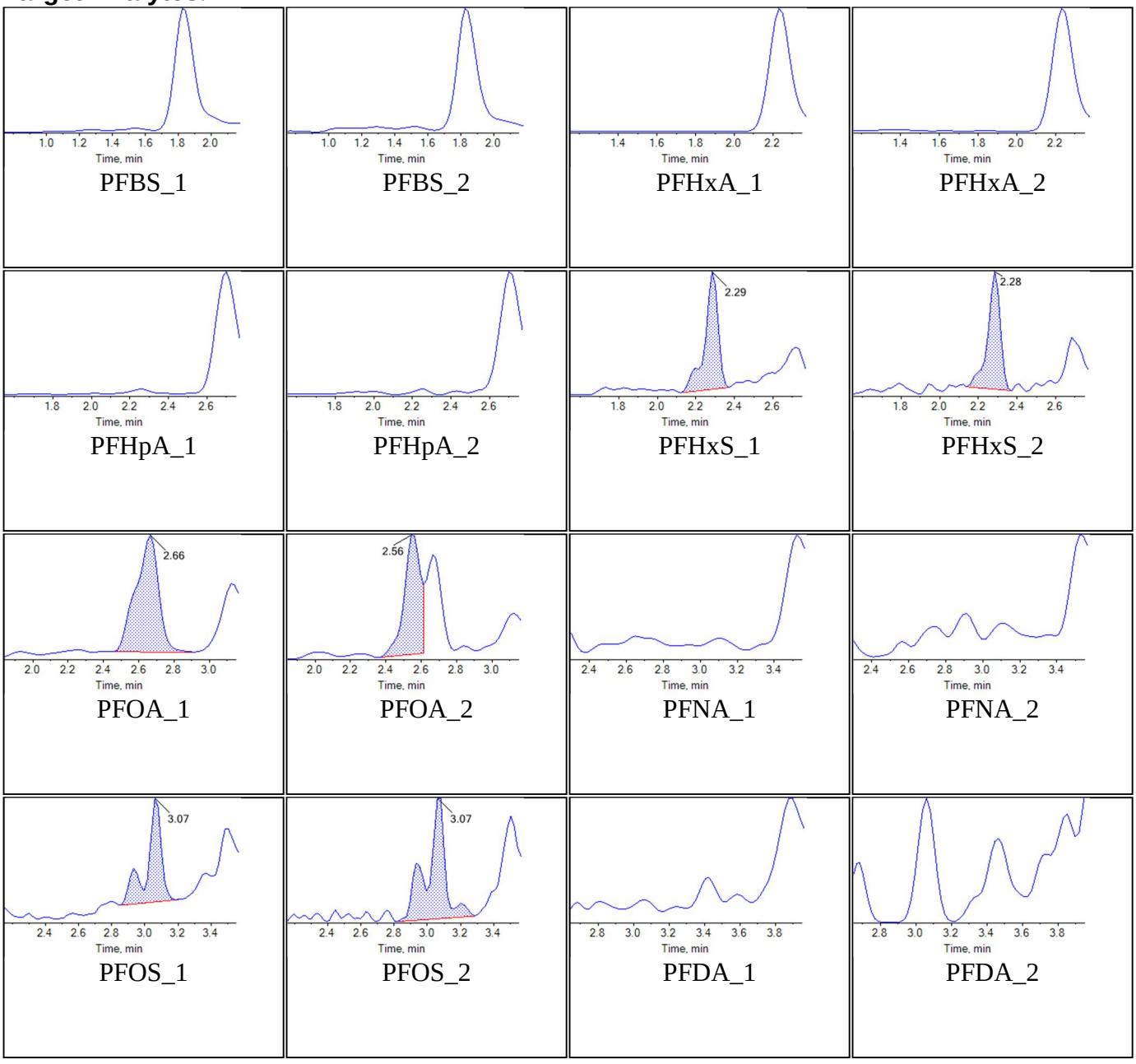
Chromatogram Report

Created with Analyst Reporter
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Sample Name	J8388-FS(3)	**Injection Vial**	30
Sample ID	VC-HS09-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:18:49	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

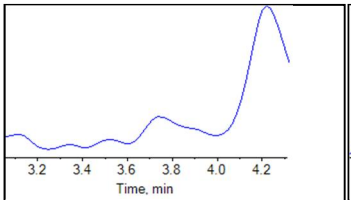
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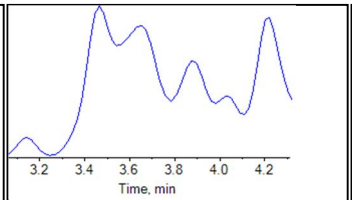
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Chromatogram Report

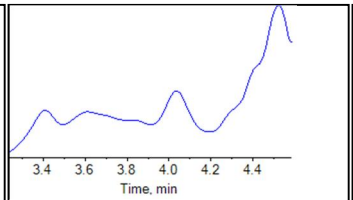
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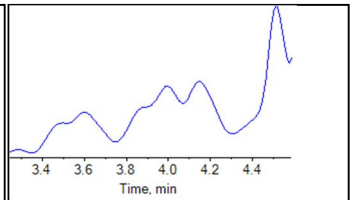
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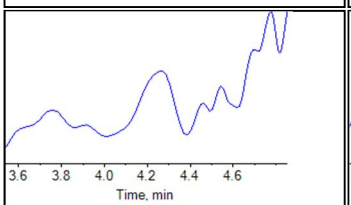
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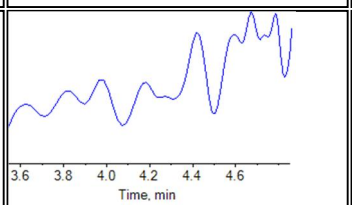
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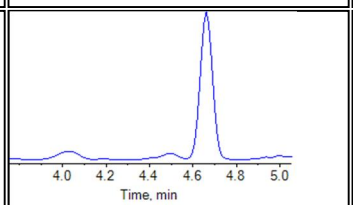
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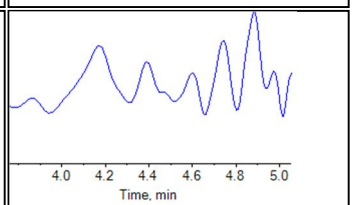
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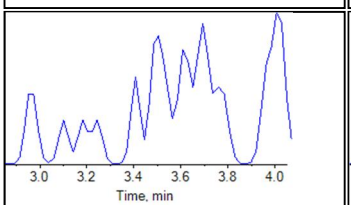
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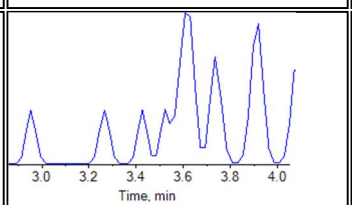
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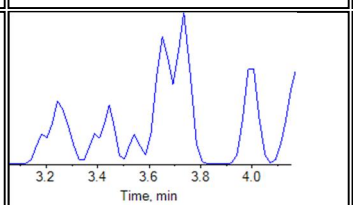
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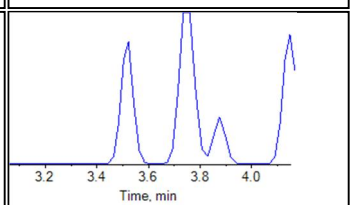
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NMeFOSAA_2

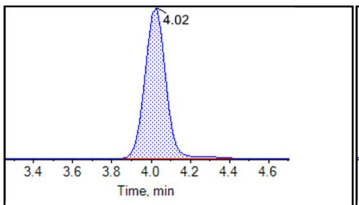


NEtFOSAA_1

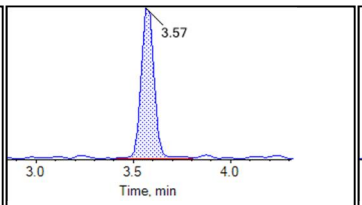


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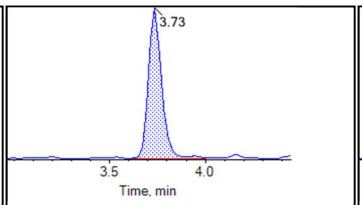
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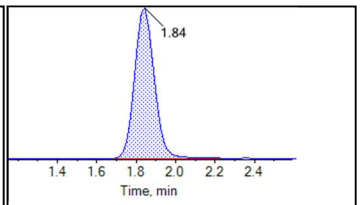
13C2-PFDoA



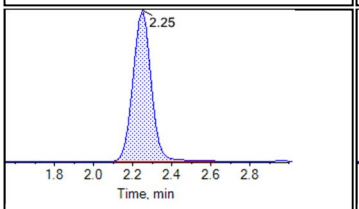
d3-MeFOSAA



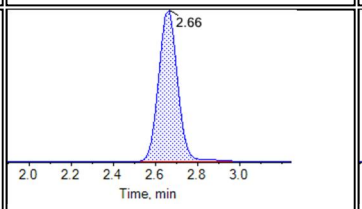
d5-EtFOSAA



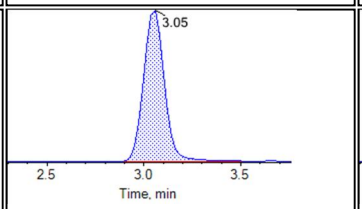
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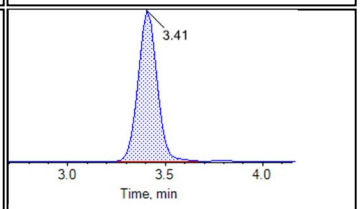
13C4-PFHpA



13C8-PFOA



13C9-PFNA

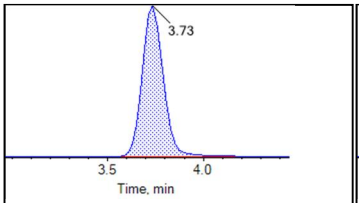


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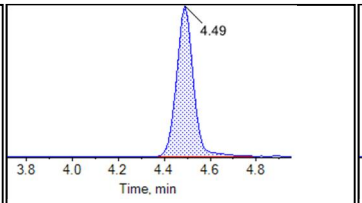
BATTELLE

Chromatogram Report

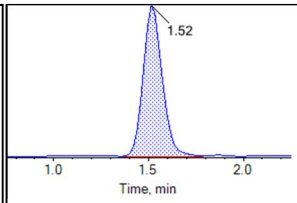
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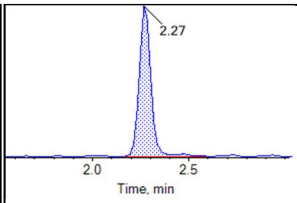
13C7-PFUnA



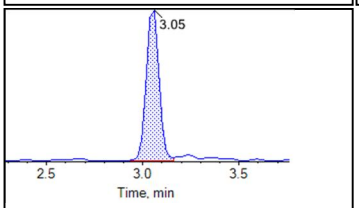
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

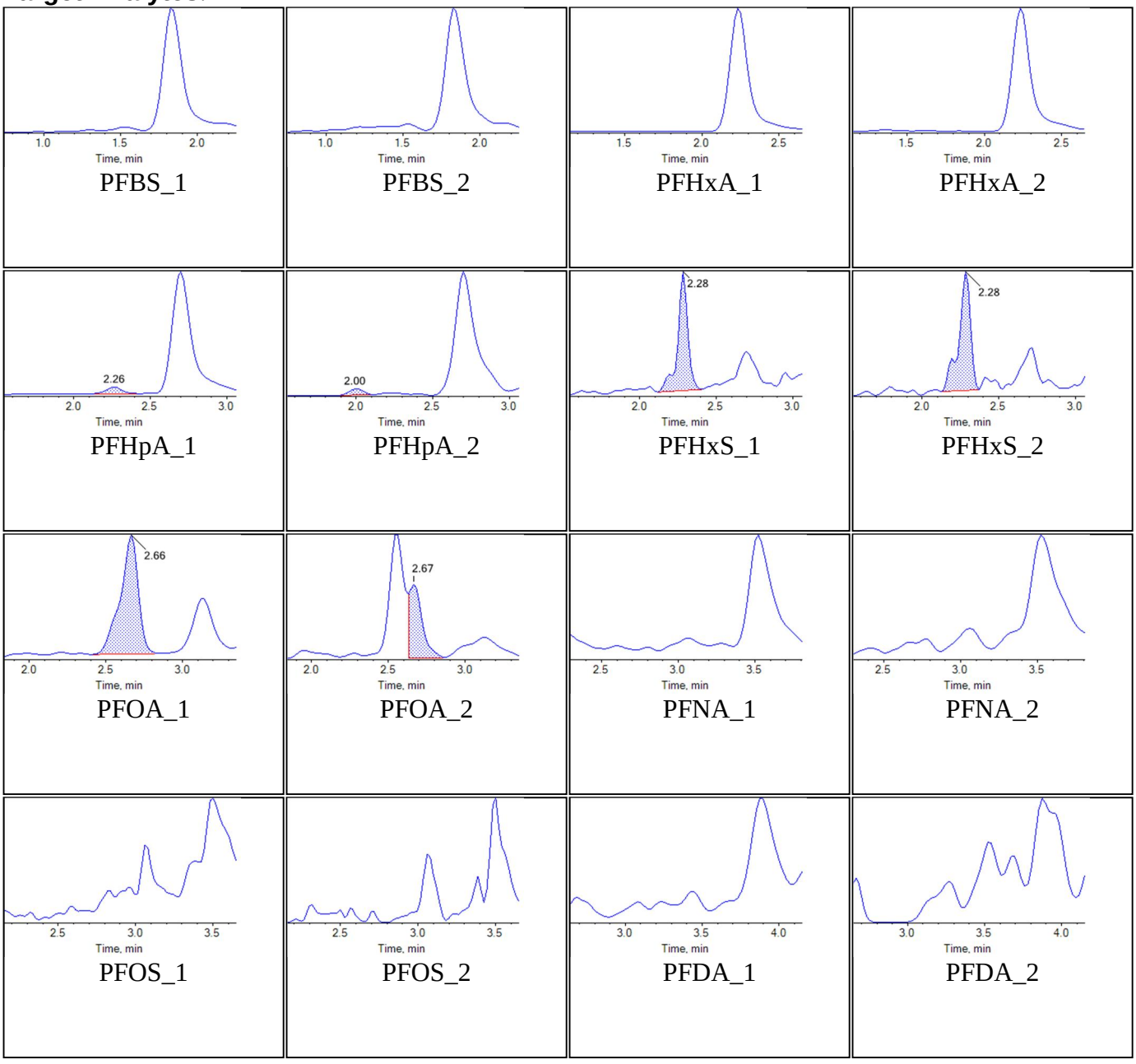
Chromatogram Report

Created with Analyst Reporter
Printed: 17/10/2018 12:20:35 PM

Sample Name	J8389-FS(3)	**Injection Vial**	31
Sample ID	VC-HS09-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:29:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

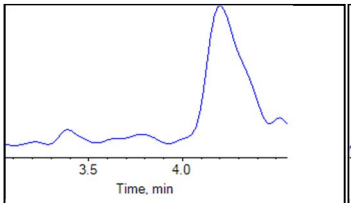
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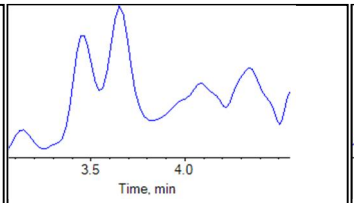
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Chromatogram Report

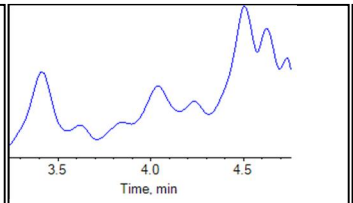
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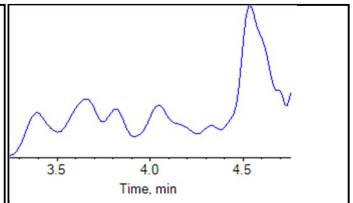
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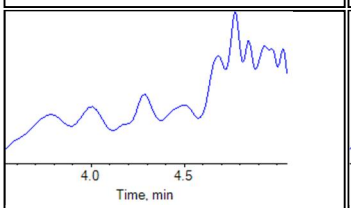
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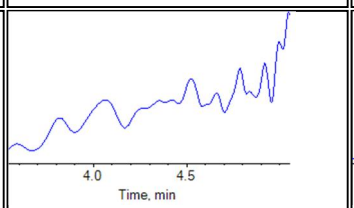
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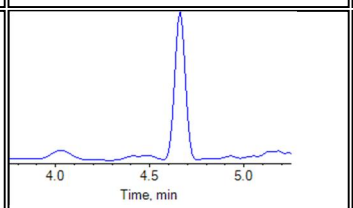
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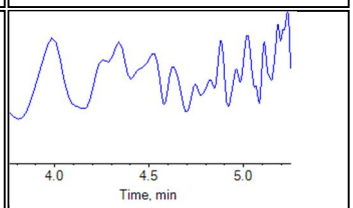
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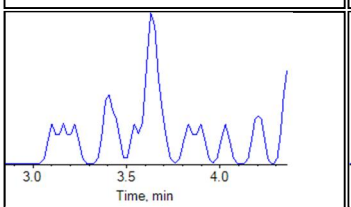
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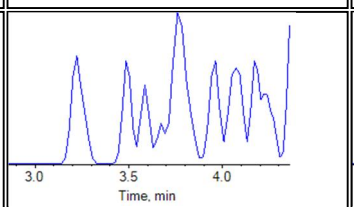
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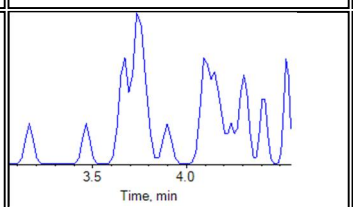
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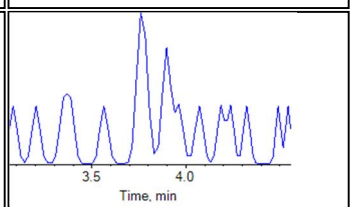
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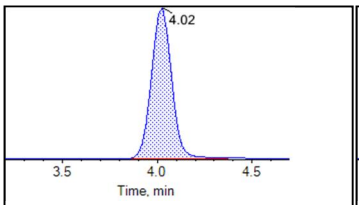


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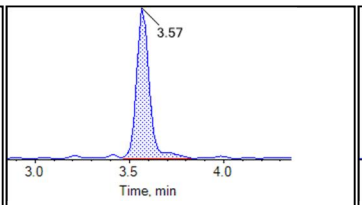


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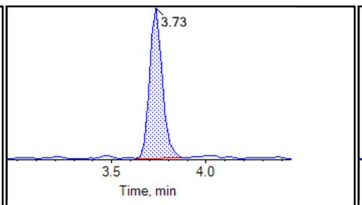
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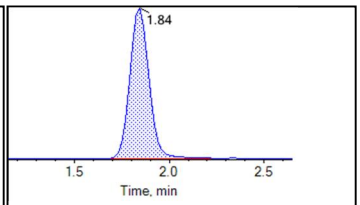
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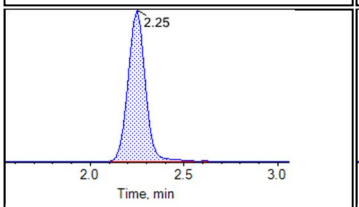
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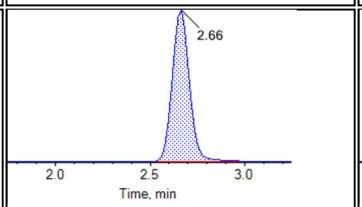
d5-EtFOSAA



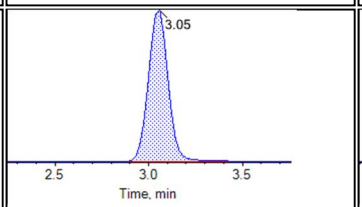
13C5-PFHxA



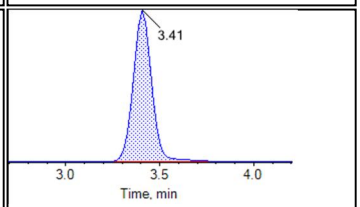
13C4-PFHpA



13C8-PFOA



13C9-PFNA

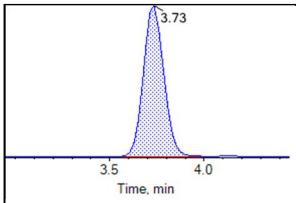


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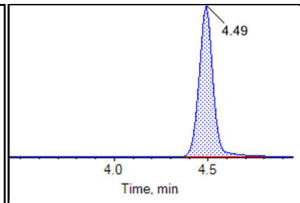
BATTELLE

Chromatogram Report

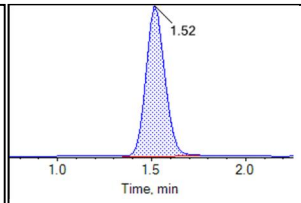
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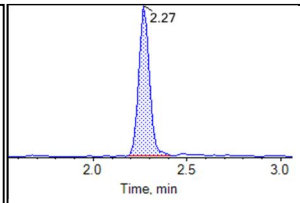
13C7-PFUnA



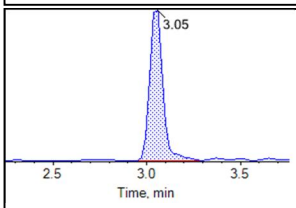
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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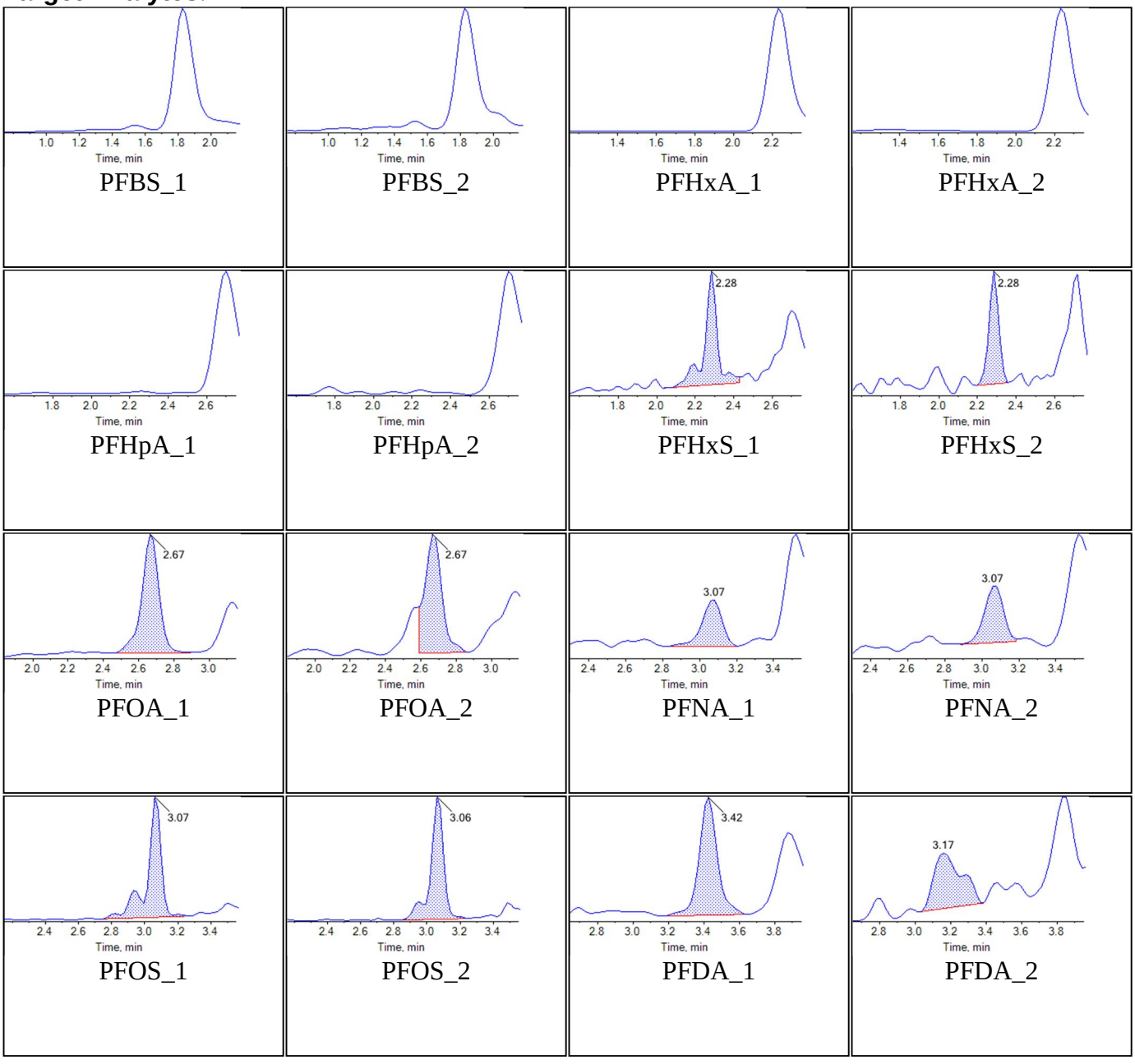
Chromatogram Report

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Printed: 22/10/2018 11:46:00 AM

Sample Name	J8390-FS(3)	**Injection Vial**	32
Sample ID	VC-HS09-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:40:32	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

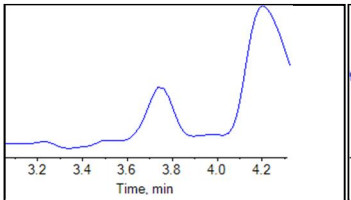
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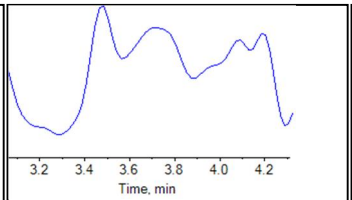
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Chromatogram Report

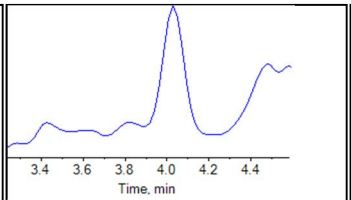
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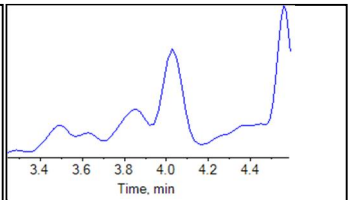
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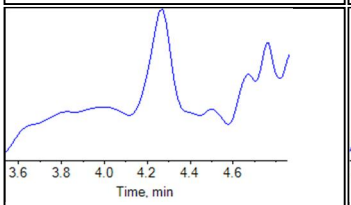
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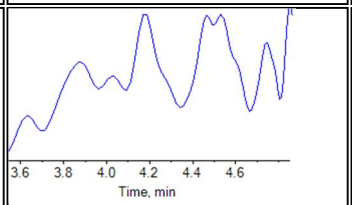
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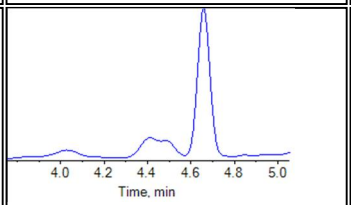
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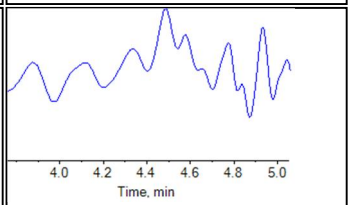
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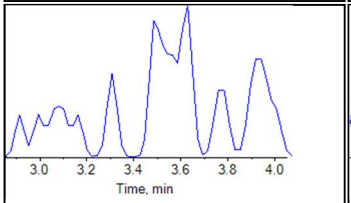
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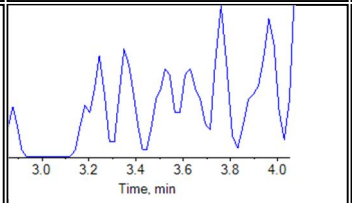
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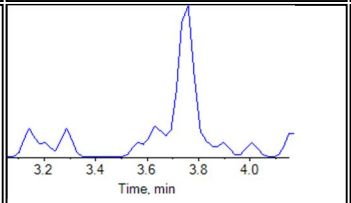
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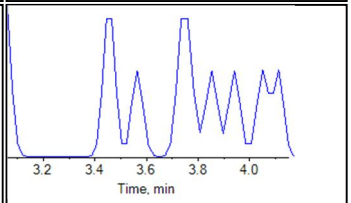
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NMeFOSAA_2

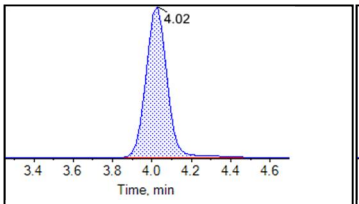


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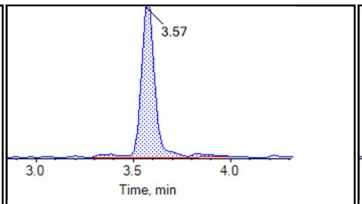


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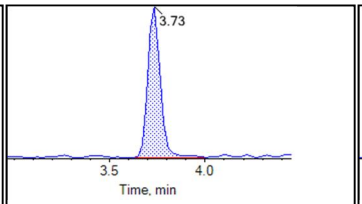
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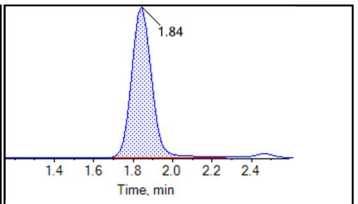
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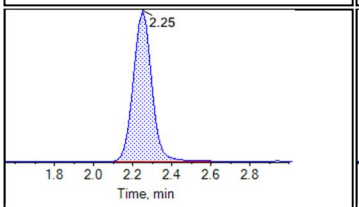
d3-MeFOSAA



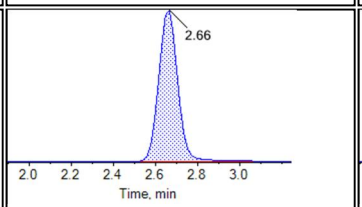
d5-EtFOSAA



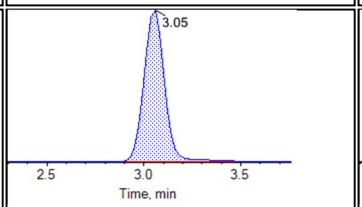
13C5-PFHxA



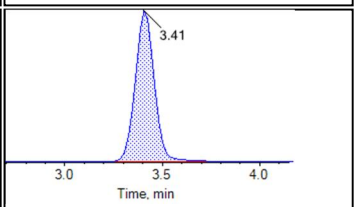
13C4-PFHpA



13C8-PFOA



13C9-PFNA

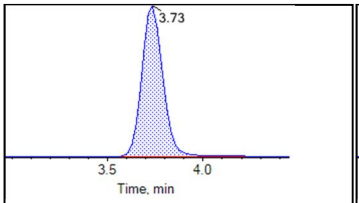


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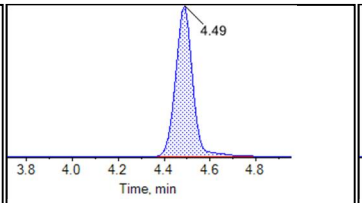
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Chromatogram Report

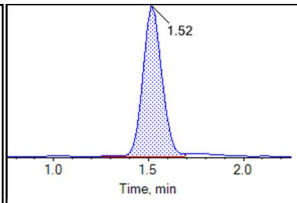
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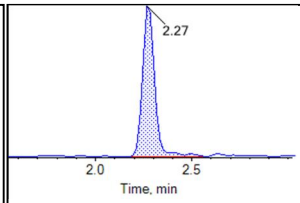
13C7-PFUnA



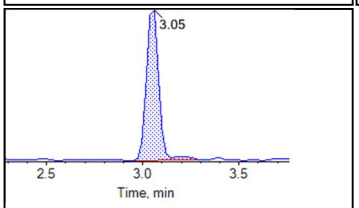
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

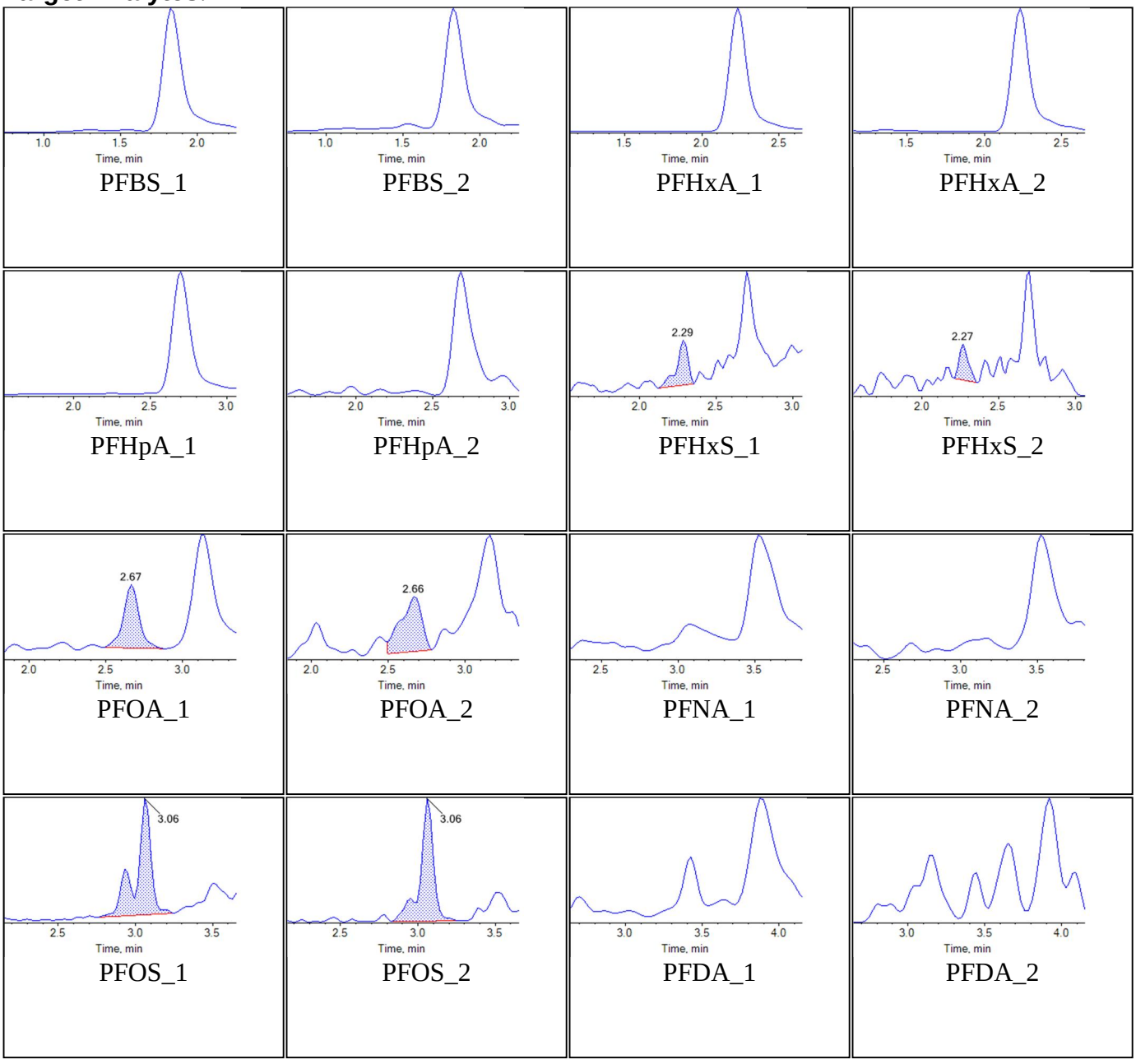
Chromatogram Report

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Printed: 17/10/2018 12:20:47 PM

Sample Name	J8391-FS(3)	**Injection Vial**	33
Sample ID	VC-HS09-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:51:23	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

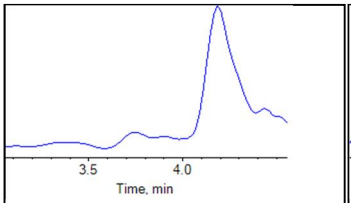
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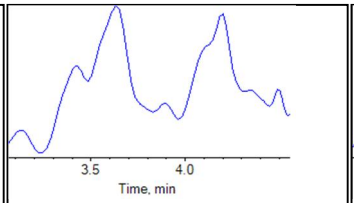
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Chromatogram Report

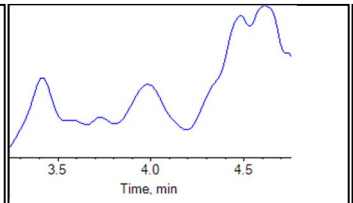
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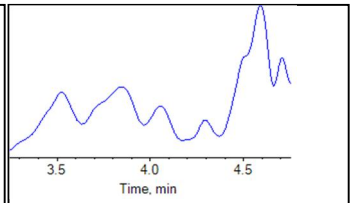
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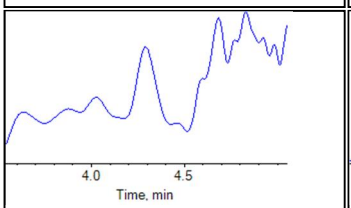
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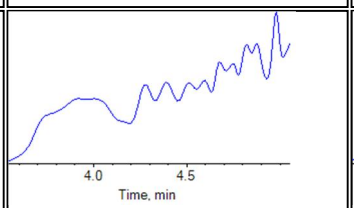
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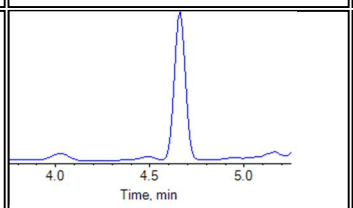
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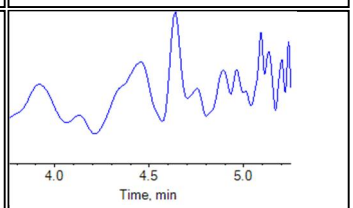
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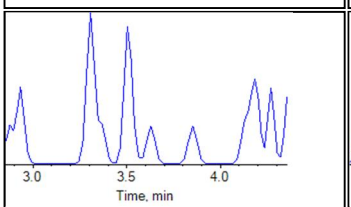
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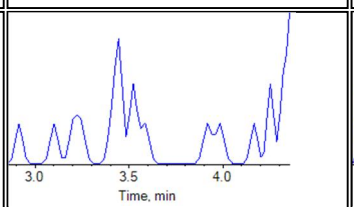
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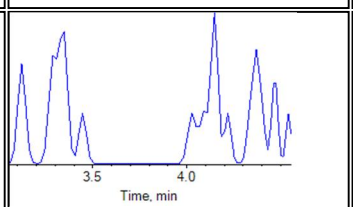
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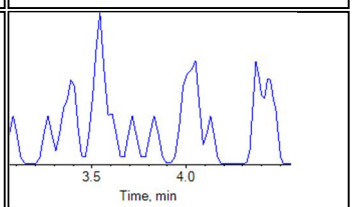
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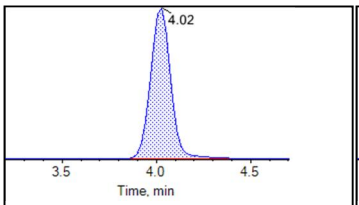


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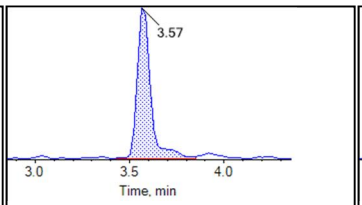


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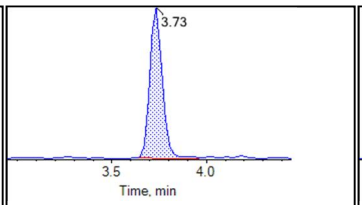
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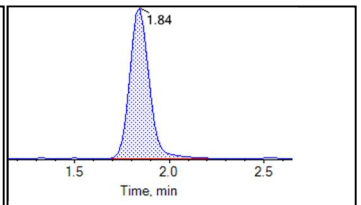
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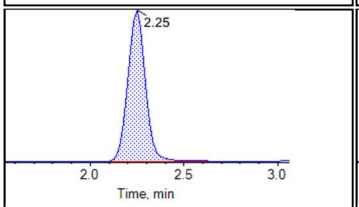
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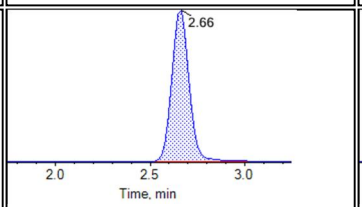
d5-EtFOSAA



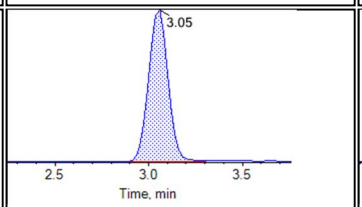
13C5-PFHxA



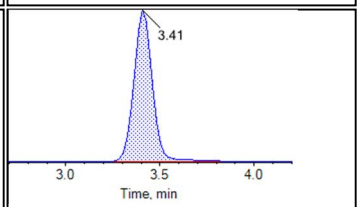
13C4-PFHpA



13C8-PFOA



13C9-PFNA

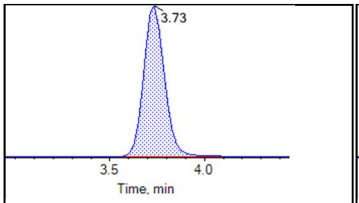


13C6-PFDA

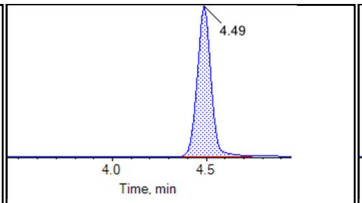
BATTELLE

Chromatogram Report

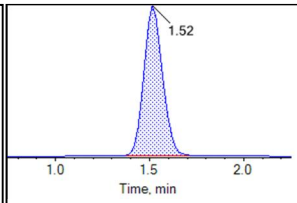
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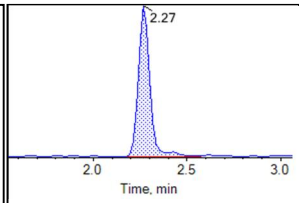
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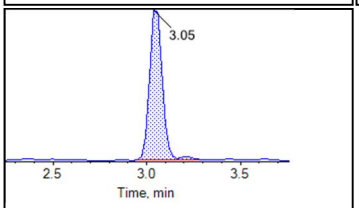
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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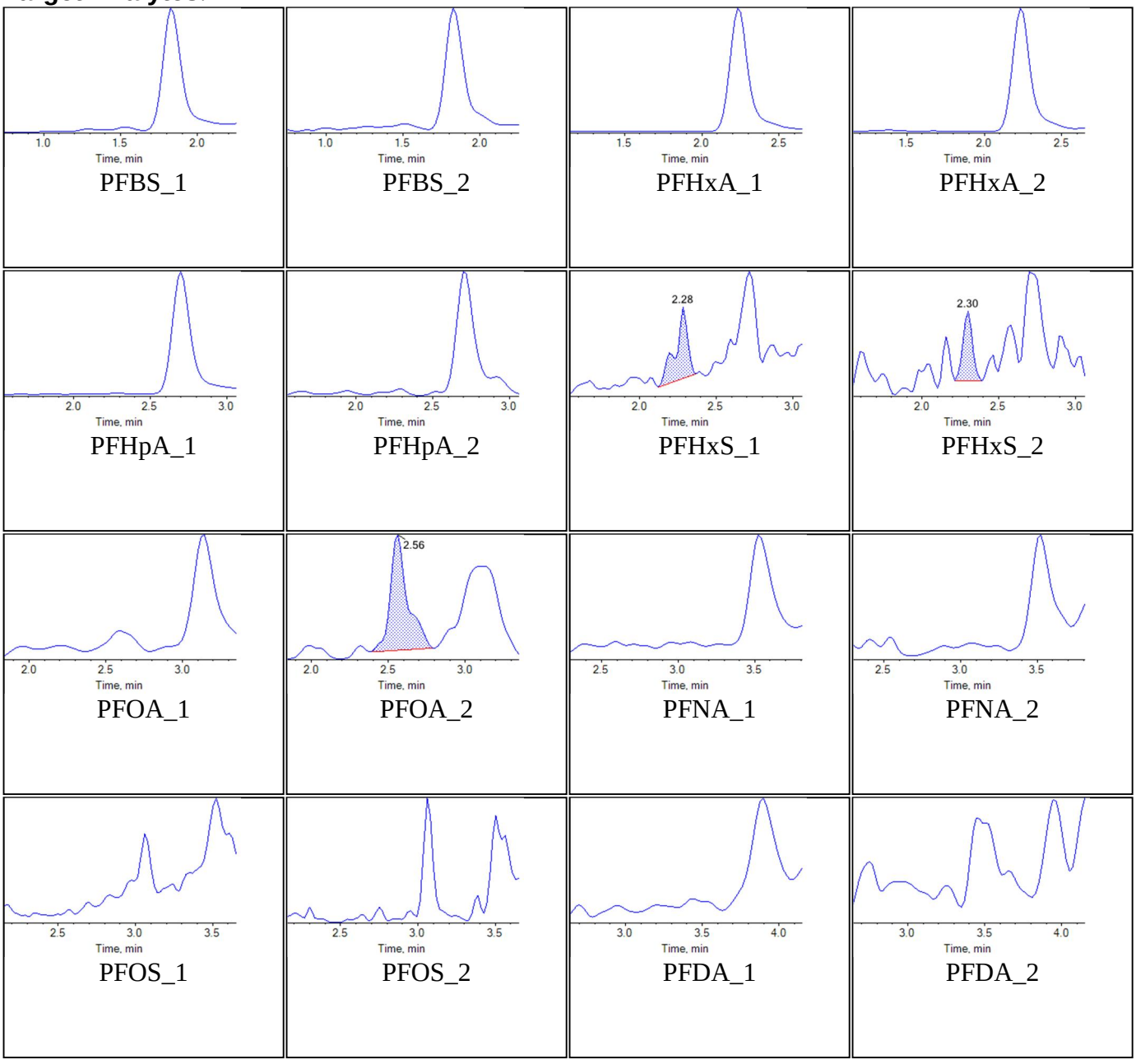
Chromatogram Report

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Sample Name	J8392-FS(3)	**Injection Vial**	34
Sample ID	VC-HS09-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:02:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

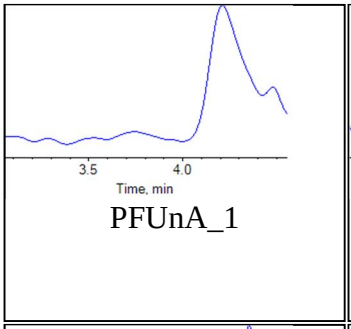
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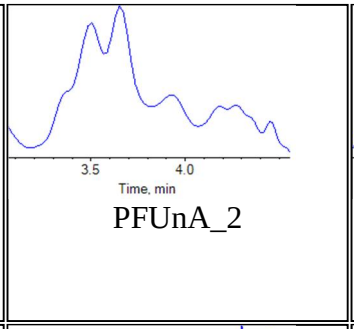
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Chromatogram Report

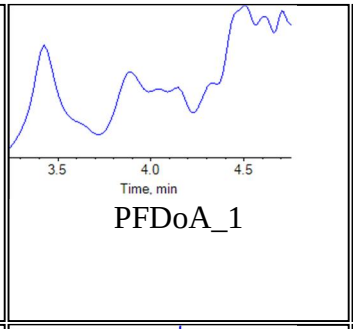
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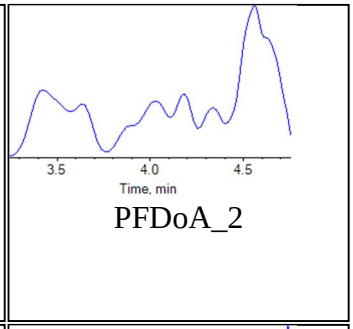
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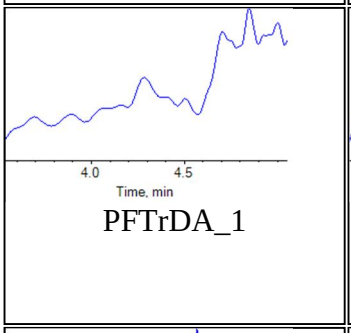
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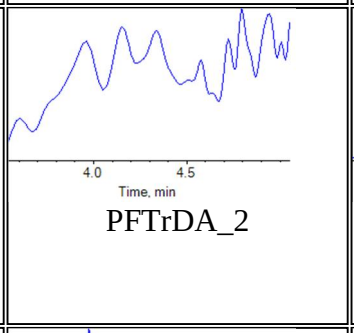
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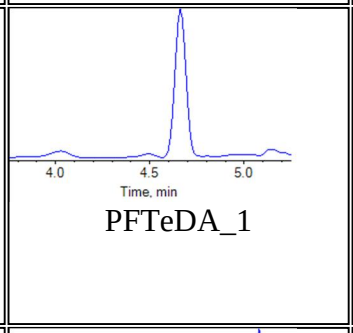
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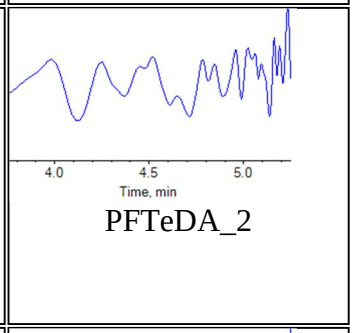
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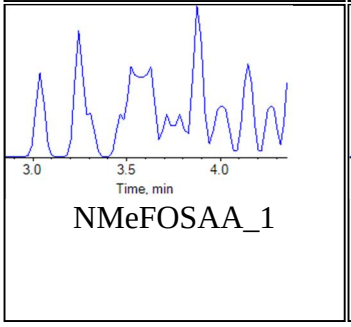
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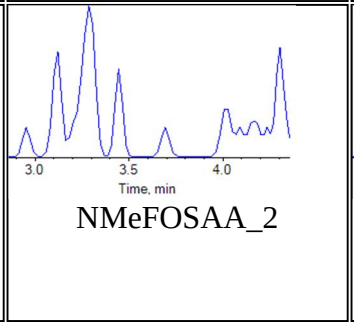
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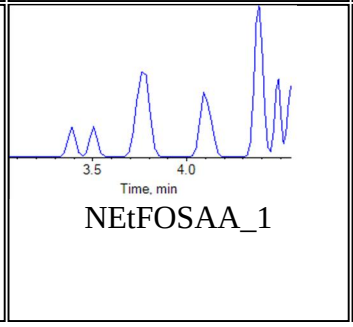
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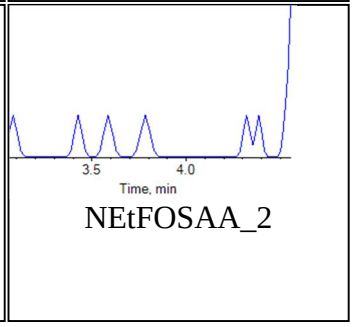
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NMeFOSAA_2

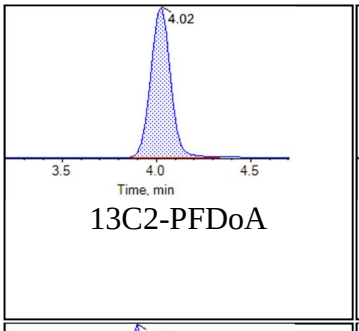


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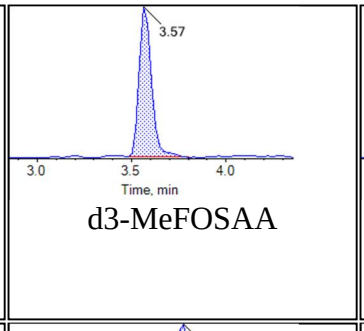


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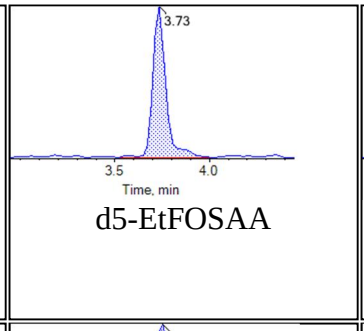
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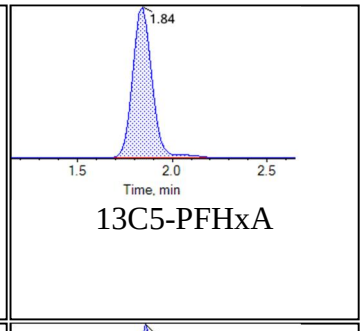
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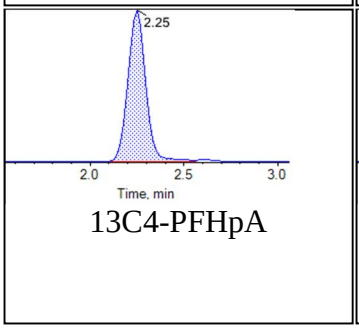
d3-MeFOSAA



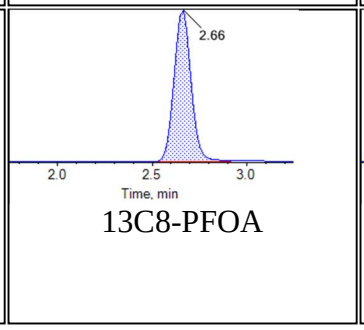
d5-EtFOSAA



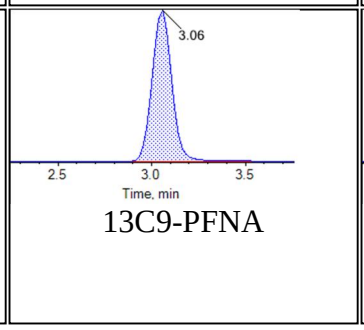
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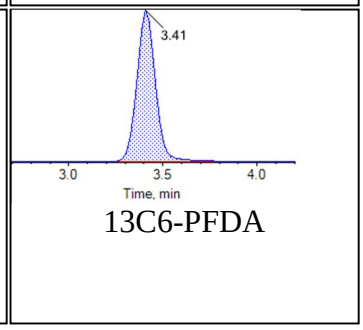
13C4-PFHpA



13C8-PFOA



13C9-PFNA

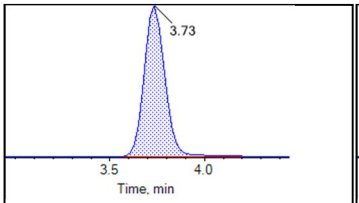


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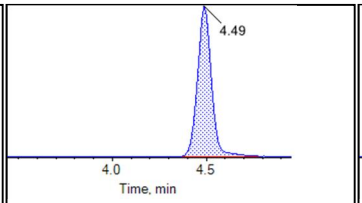
BATTELLE

Chromatogram Report

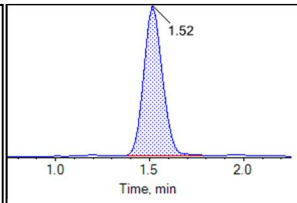
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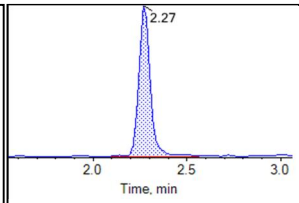
13C7-PFUnA



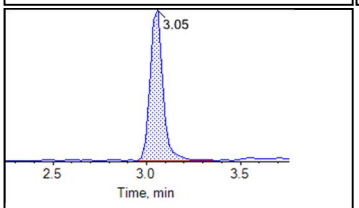
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

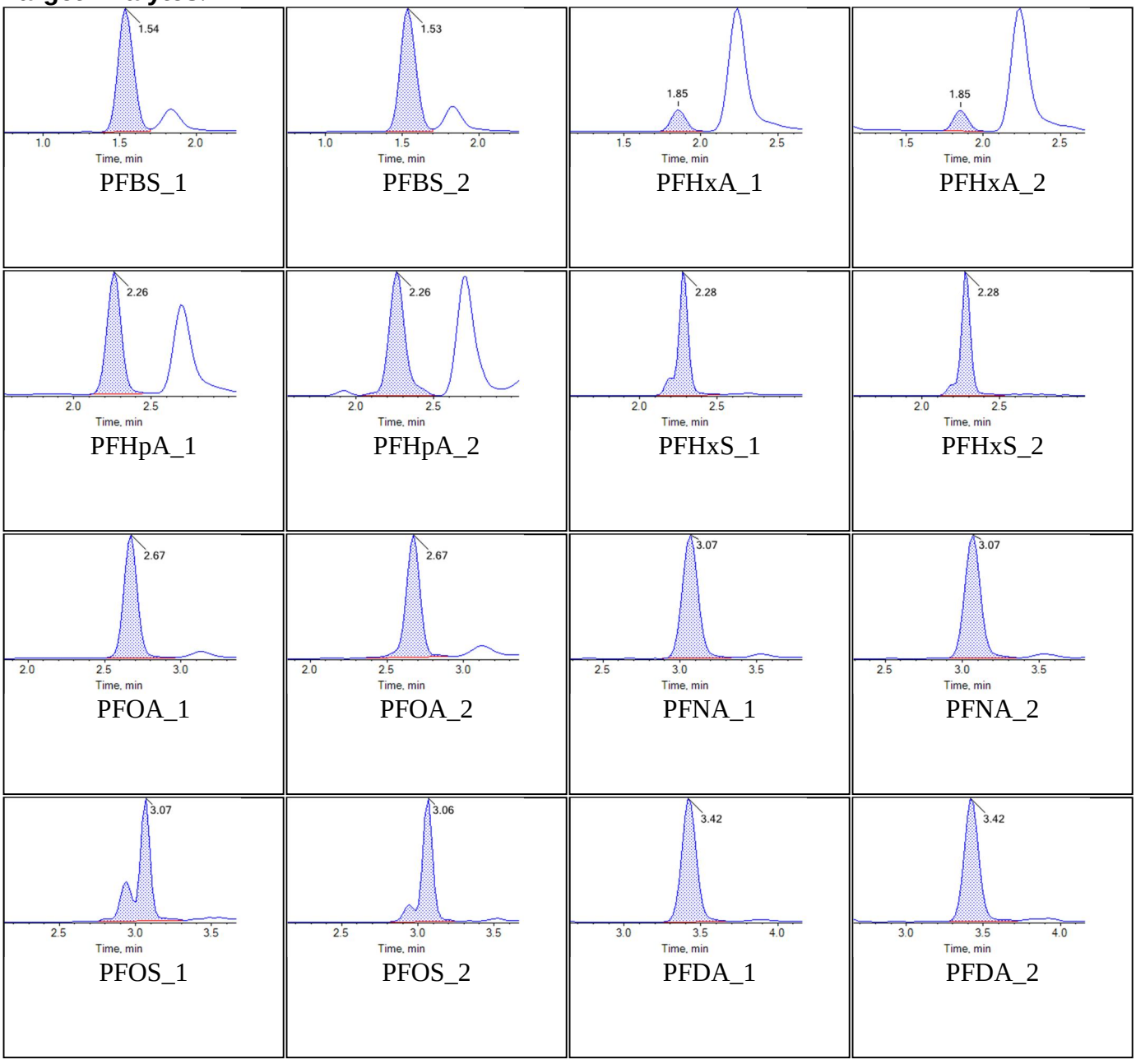
Chromatogram Report

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Printed: 17/10/2018 12:21:00 PM

Sample Name	KB76 CCV	**Injection Vial**	35
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

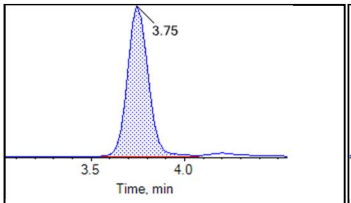
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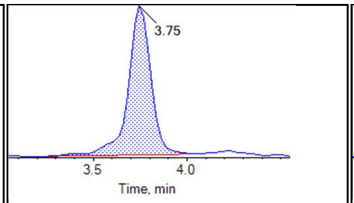
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Chromatogram Report

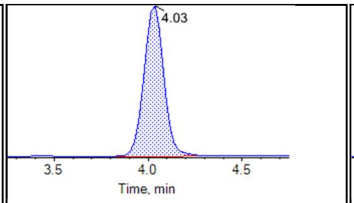
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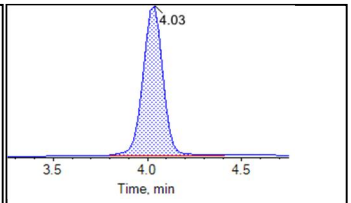
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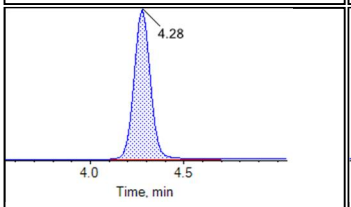
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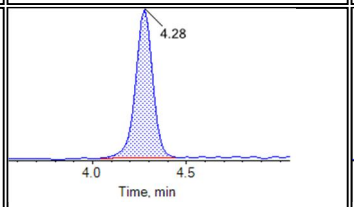
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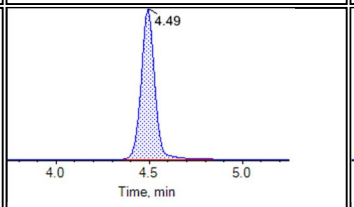
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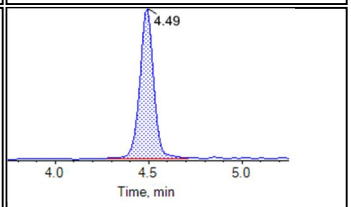
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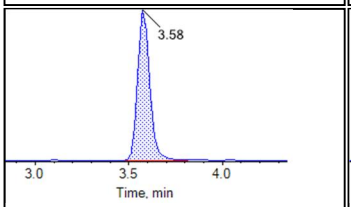
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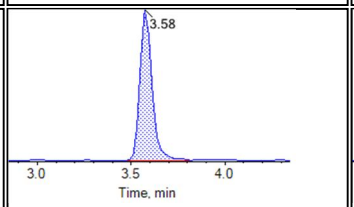
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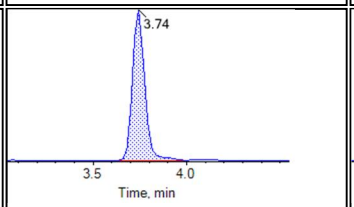
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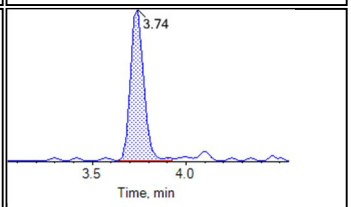
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NMeFOSAA_2

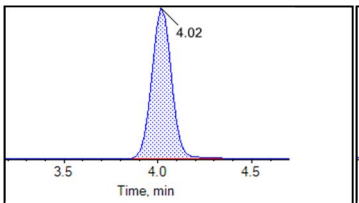


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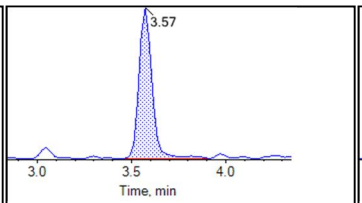


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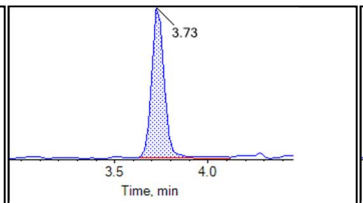
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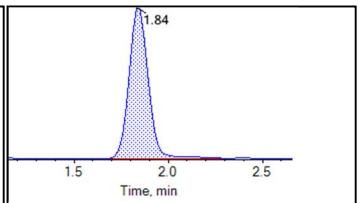
13C2-PFDoA



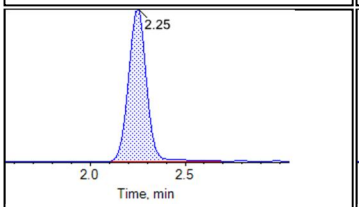
d3-MeFOSAA



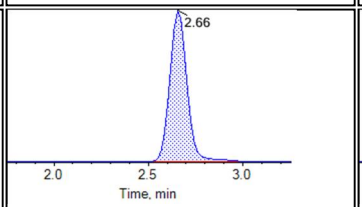
d5-EtFOSAA



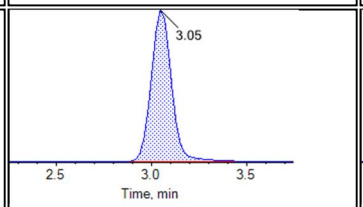
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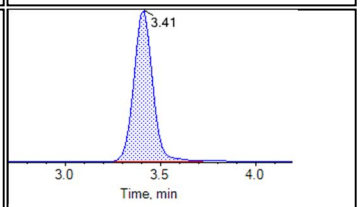
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13C8-PFOA



13C9-PFNA

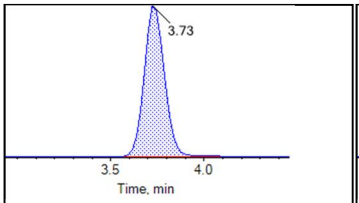


13C6-PFDA

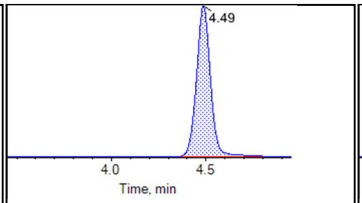
BATTELLE

Chromatogram Report

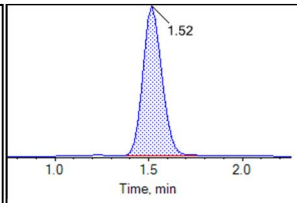
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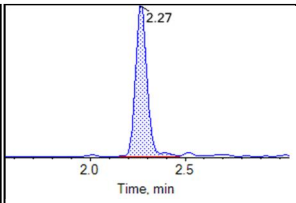
13C7-PFUnA



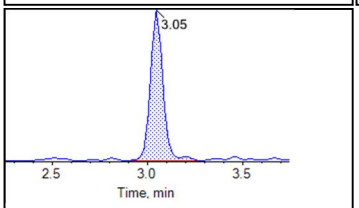
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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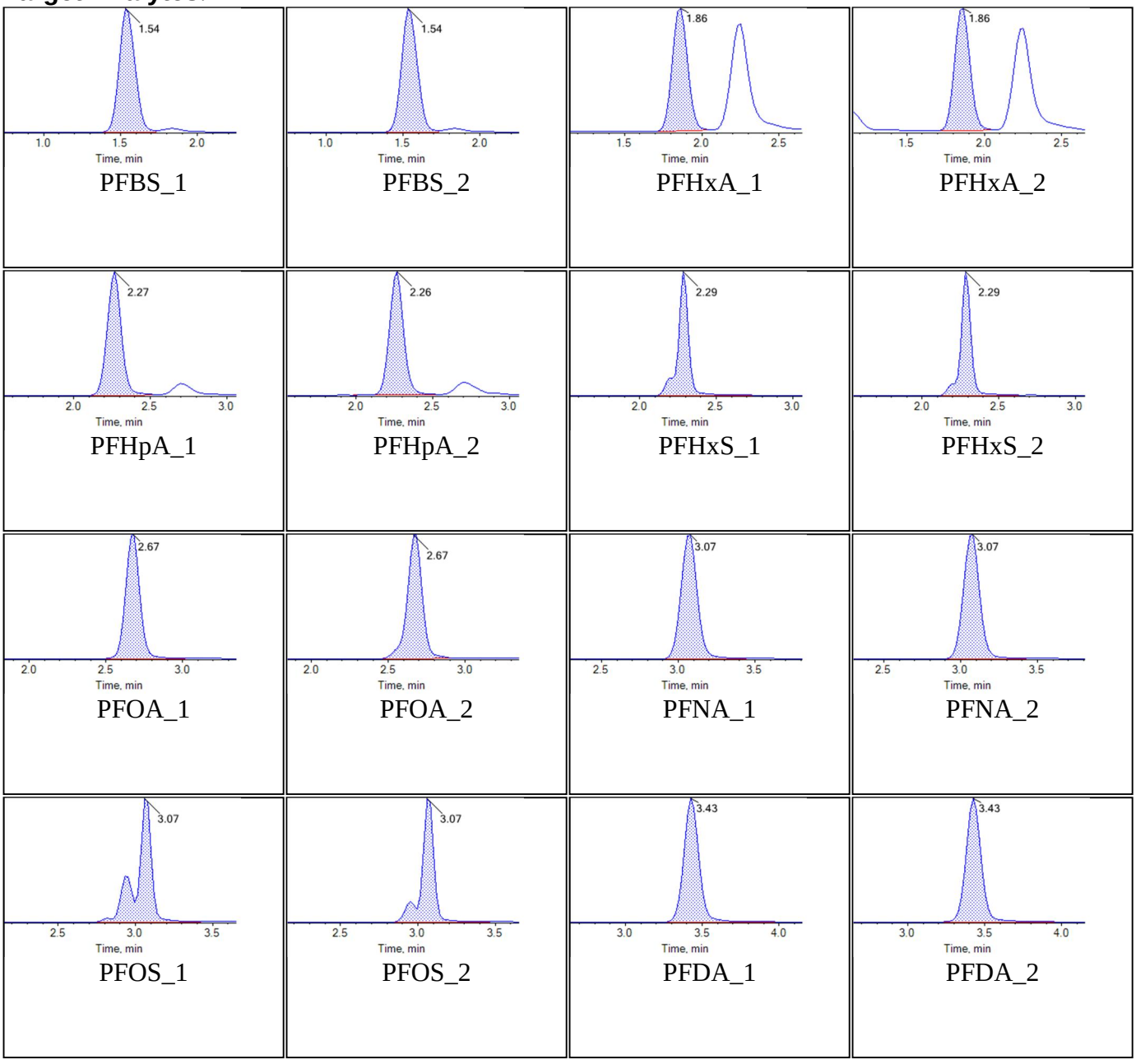
Chromatogram Report

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Printed: 17/10/2018 12:21:11 PM

Sample Name	J8393MS-FS(3)	**Injection Vial**	37
Sample ID	VC-HS09-SB03-0506-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:34:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

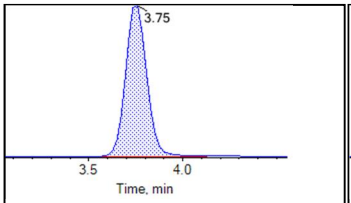
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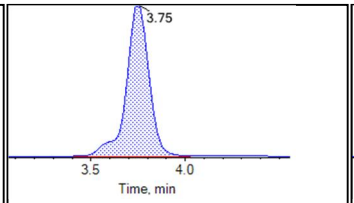
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Chromatogram Report

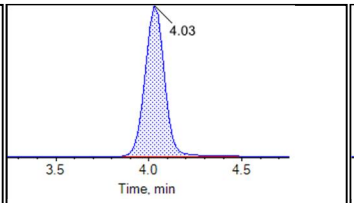
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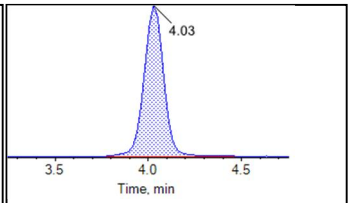
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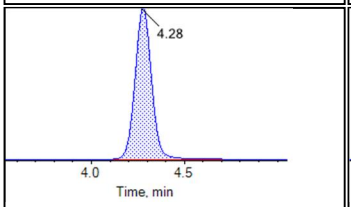
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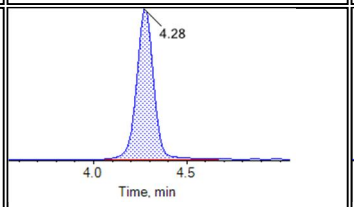
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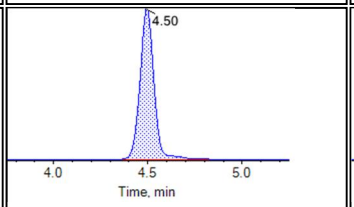
PFDoA_2



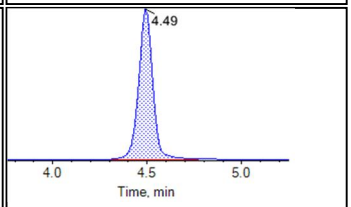
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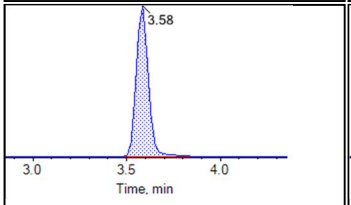
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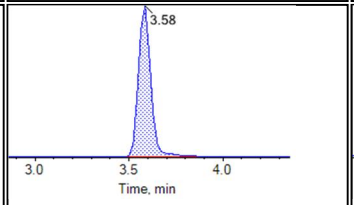
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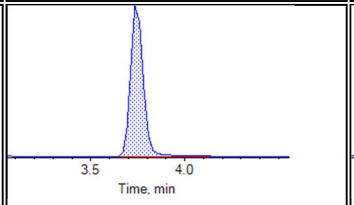
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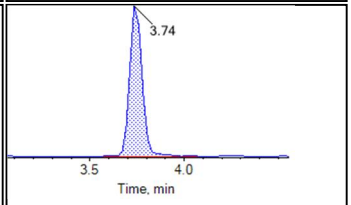
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NMeFOSAA_2

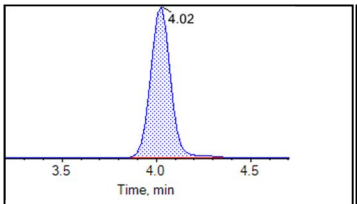


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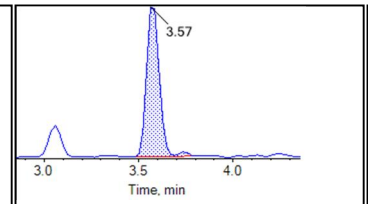


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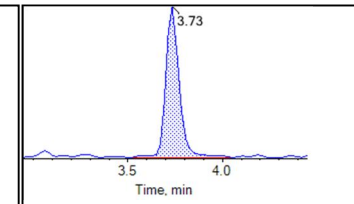
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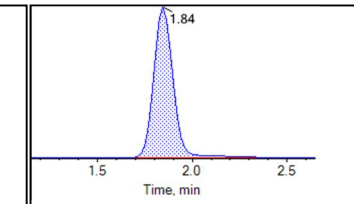
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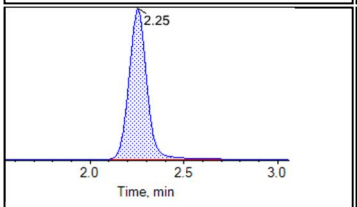
d3-MeFOSAA



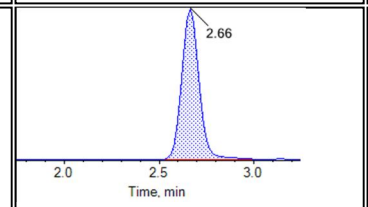
d5-EtFOSAA



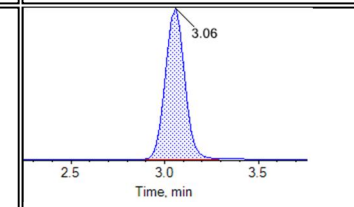
13C5-PFHxA



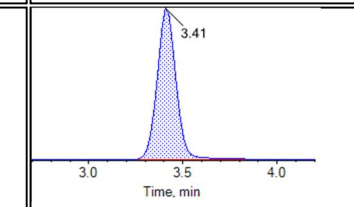
13C4-PFHpA



13C8-PFOA



13C9-PFNA

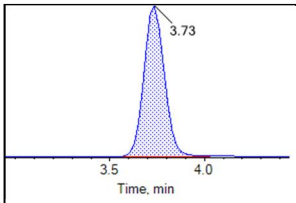


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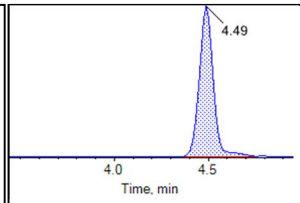
BATTELLE

Chromatogram Report

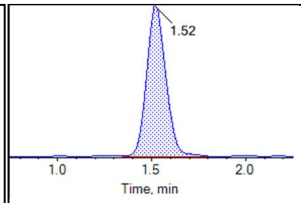
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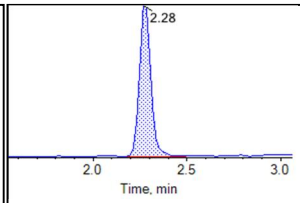
13C7-PFUnA



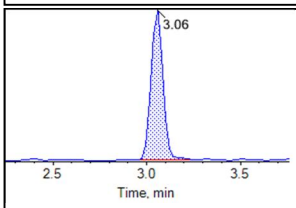
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

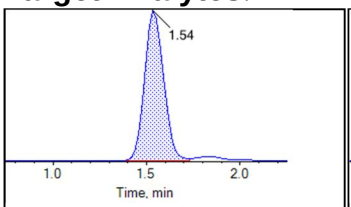
Chromatogram Report

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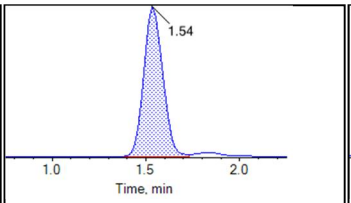
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Sample ID	VC-HS09-SB03-0506-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:45:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

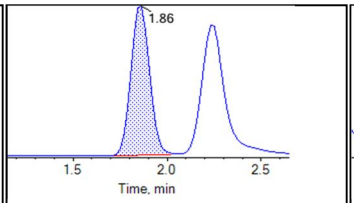
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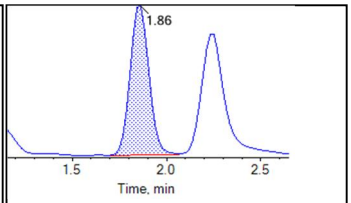
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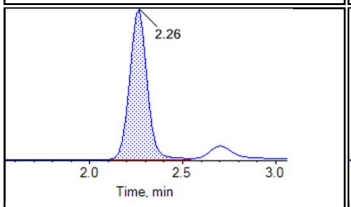
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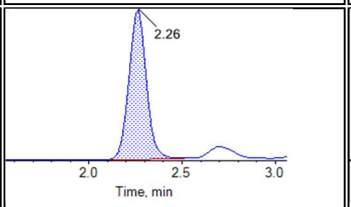
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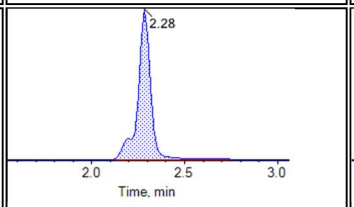
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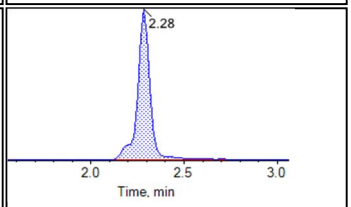
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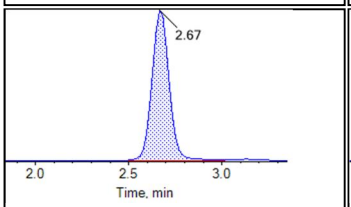
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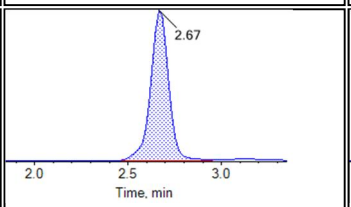
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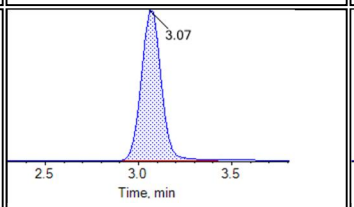
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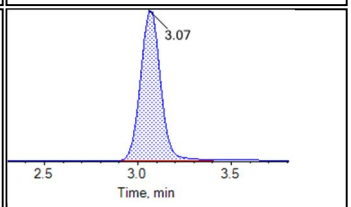
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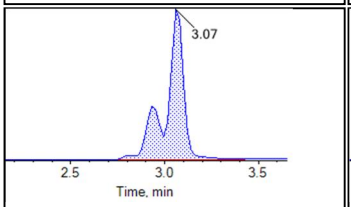
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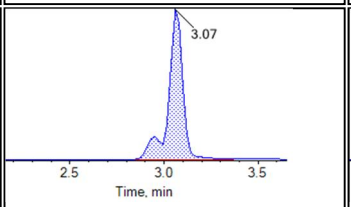
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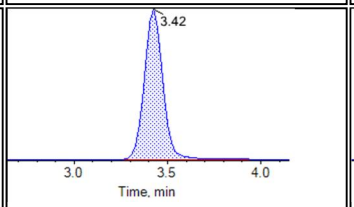
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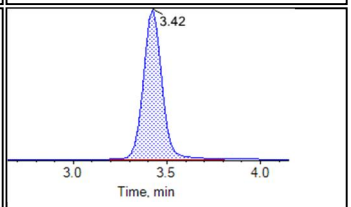
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PFOS_2



PFDA_1

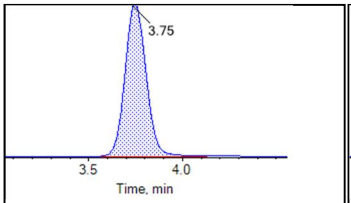


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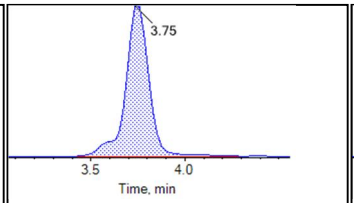
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Chromatogram Report

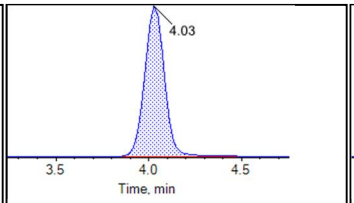
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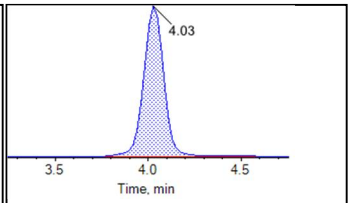
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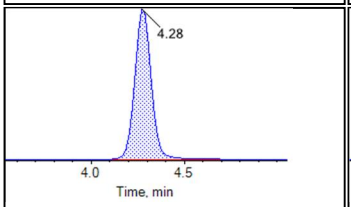
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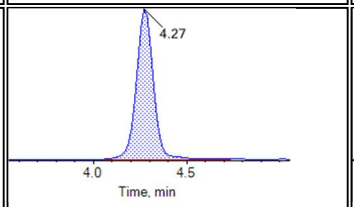
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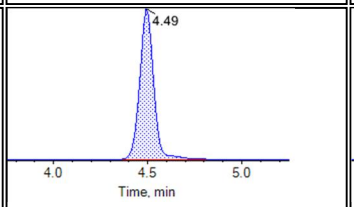
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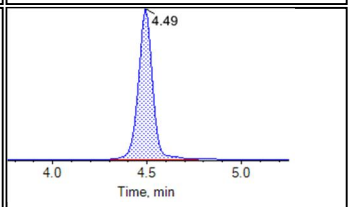
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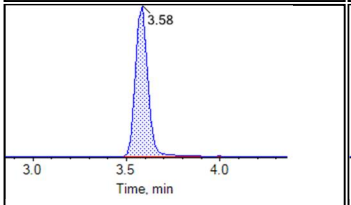
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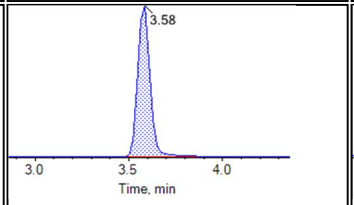
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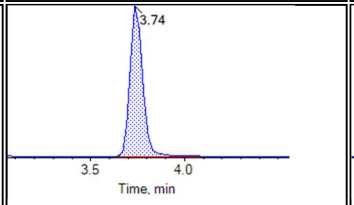
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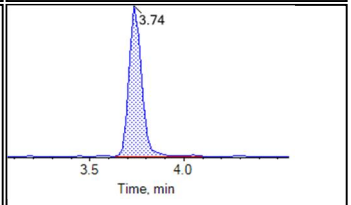
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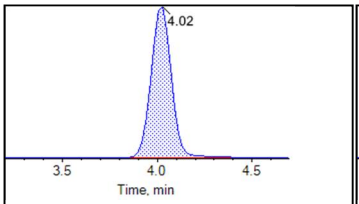


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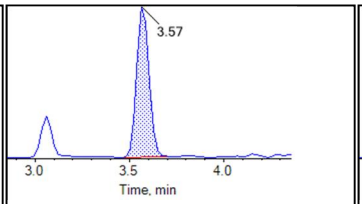


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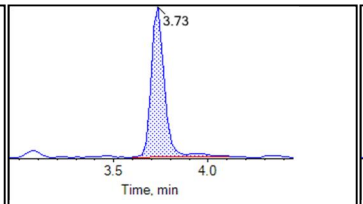
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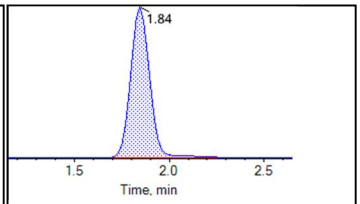
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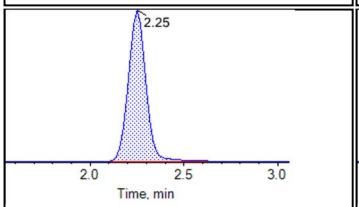
d3-MeFOSAA



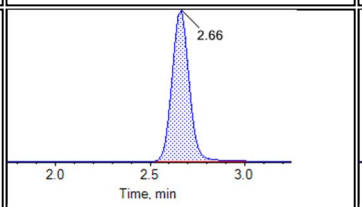
d5-EtFOSAA



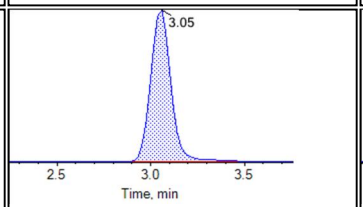
13C5-PFHxA



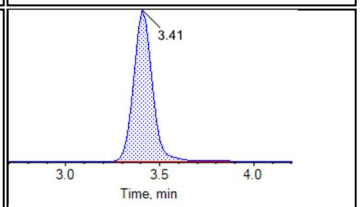
13C4-PFHpA



13C8-PFOA



13C9-PFNA

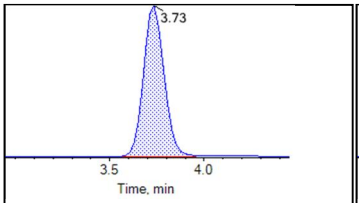


13C6-PFDA

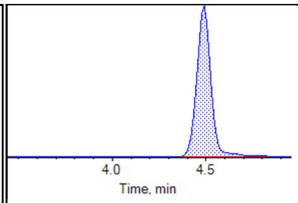
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Chromatogram Report

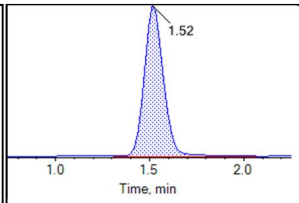
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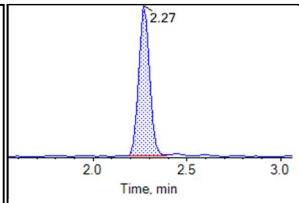
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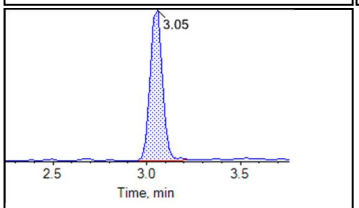
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

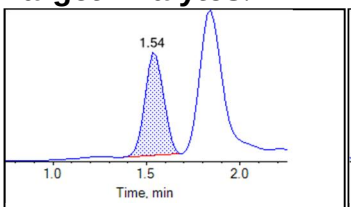
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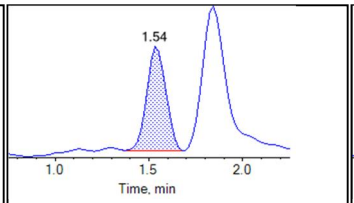
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Sample ID	VC-HS09-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:56:30	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

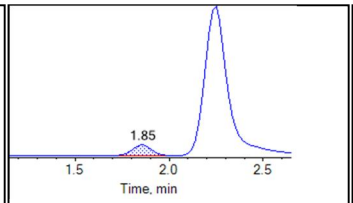
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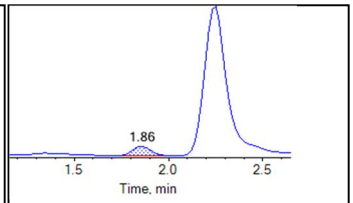
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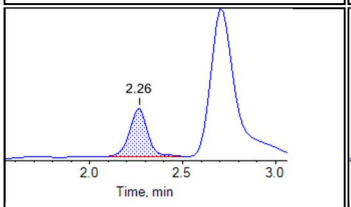
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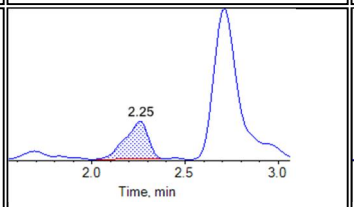
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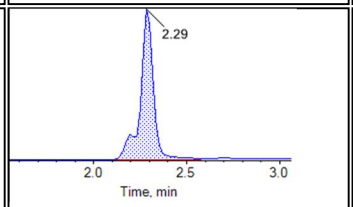
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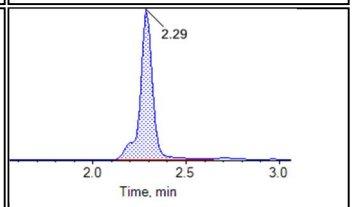
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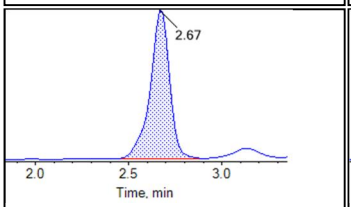
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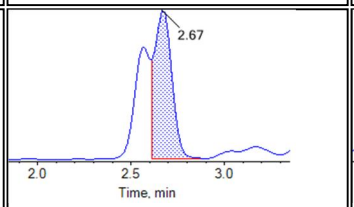
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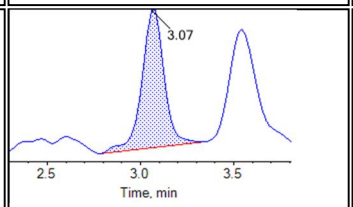
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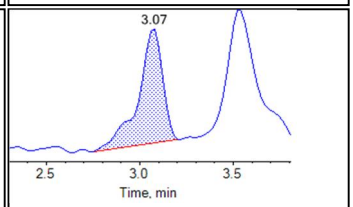
PFOA_1



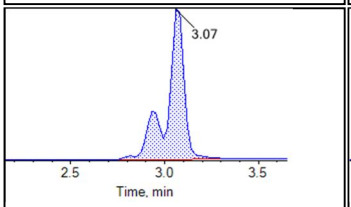
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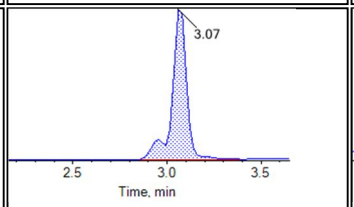
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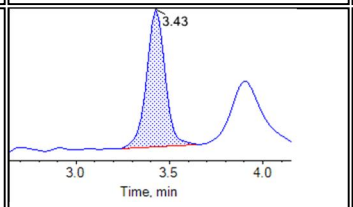
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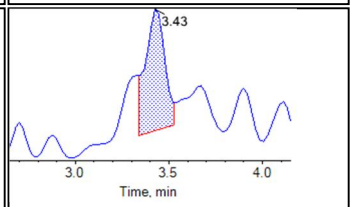
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PFOS_2



PFDA_1

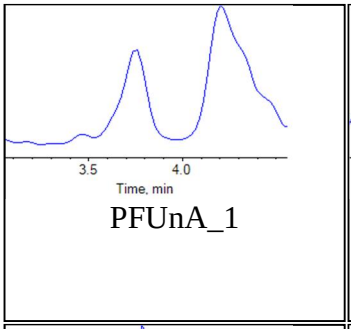


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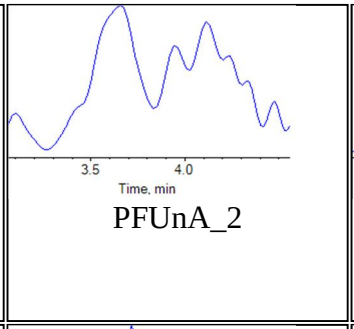
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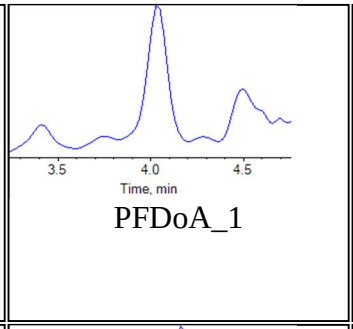
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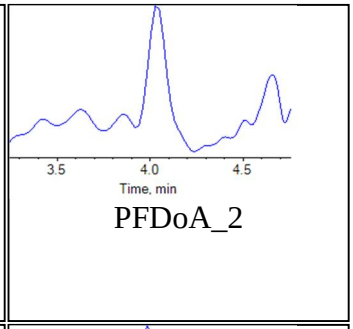
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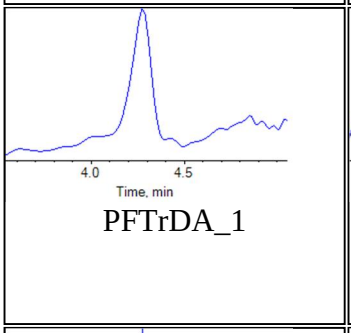
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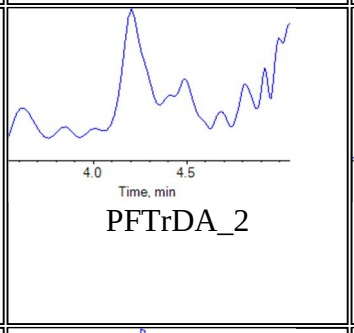
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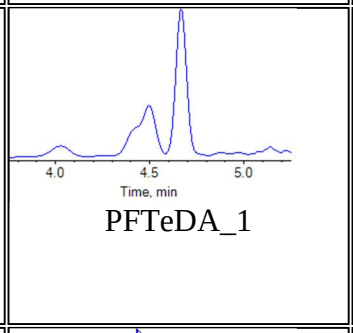
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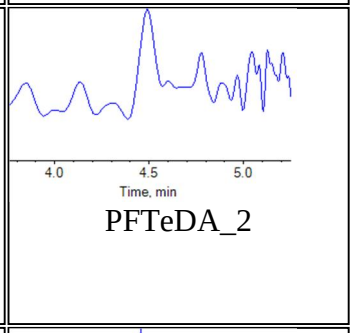
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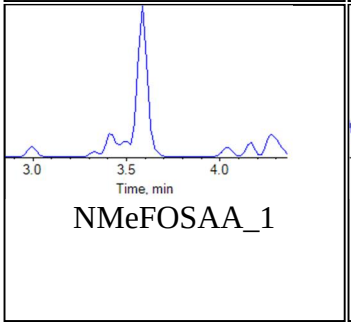
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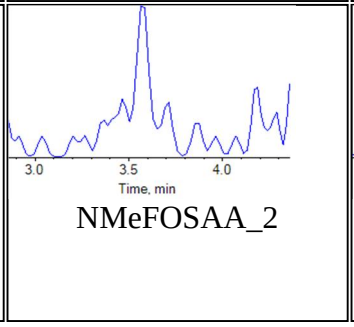
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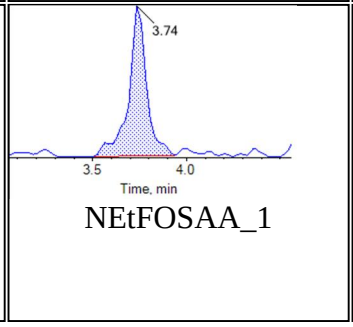
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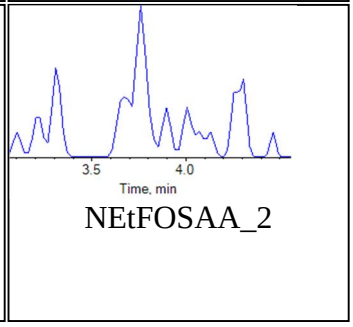
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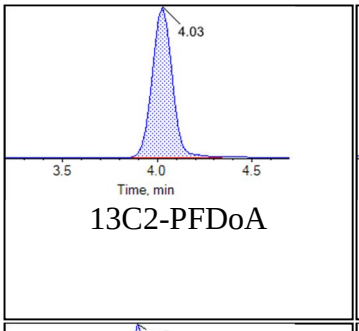


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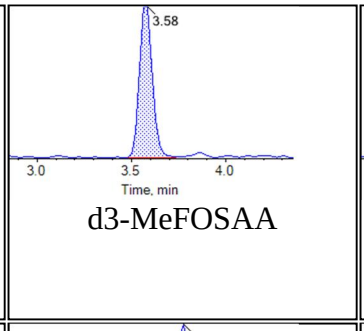


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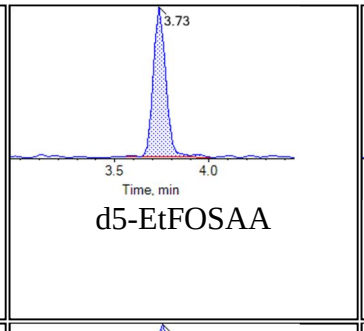
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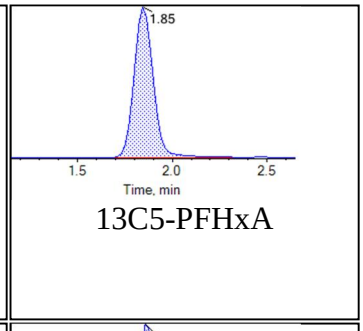
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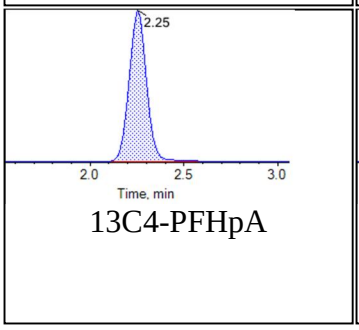
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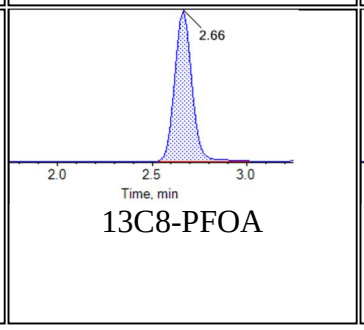
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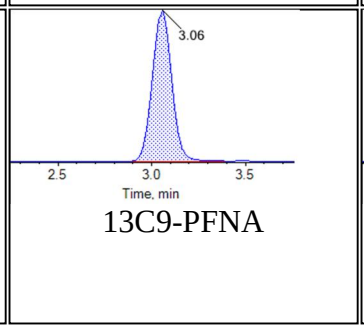
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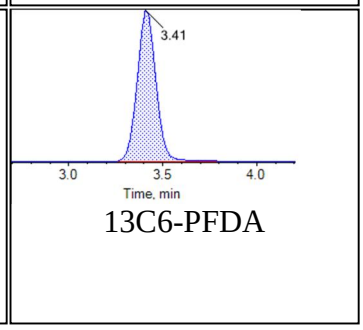
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13C8-PFOA



13C9-PFNA

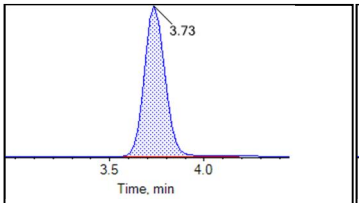


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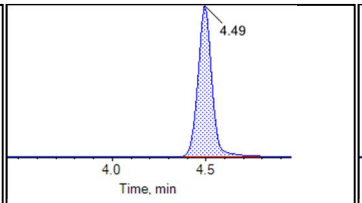
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Chromatogram Report

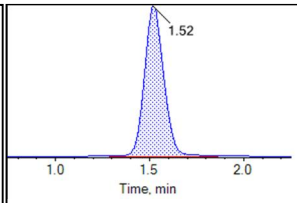
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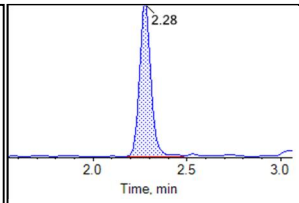
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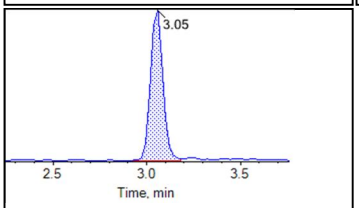
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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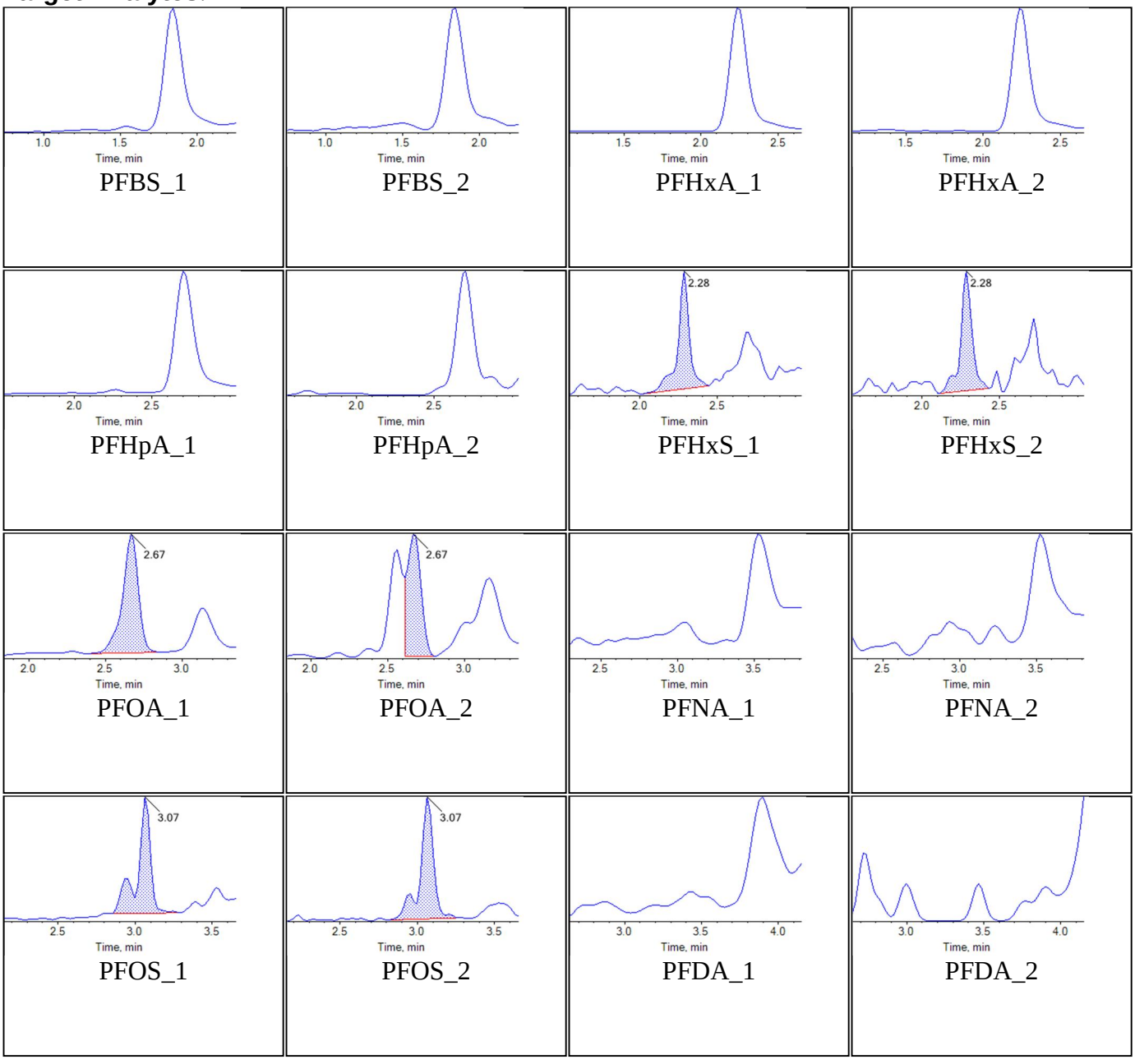
Chromatogram Report

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Sample Name	J8402-FS(3)	**Injection Vial**	40
Sample ID	VC-HS09-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:07:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

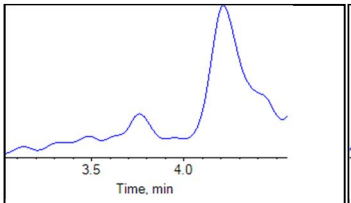
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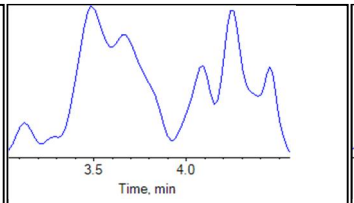
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Chromatogram Report

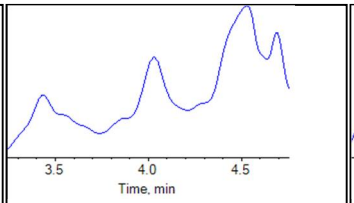
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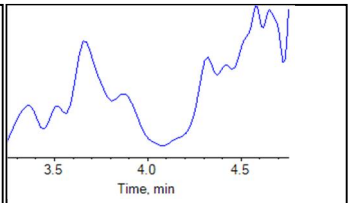
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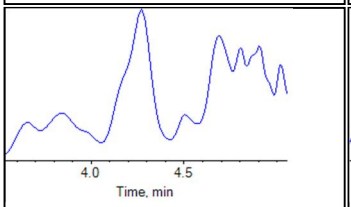
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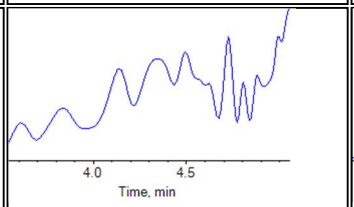
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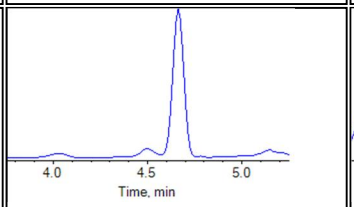
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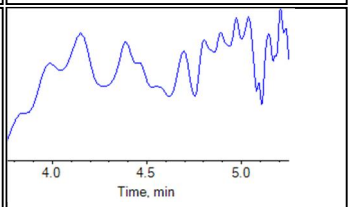
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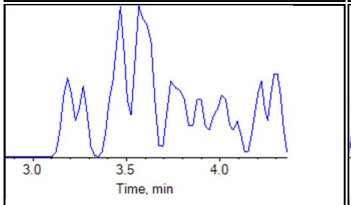
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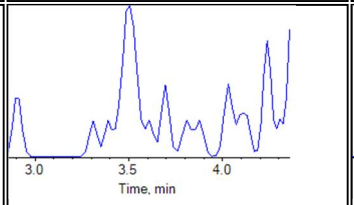
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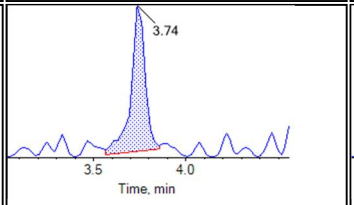
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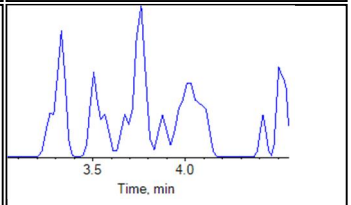
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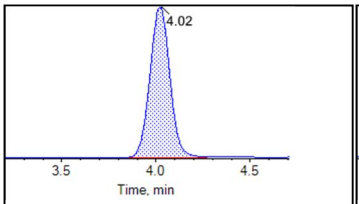


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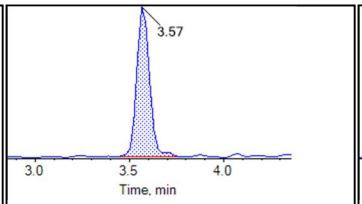


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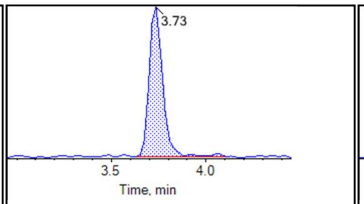
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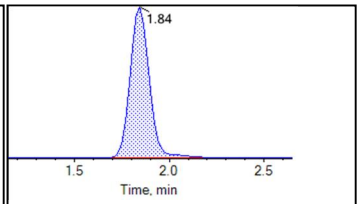
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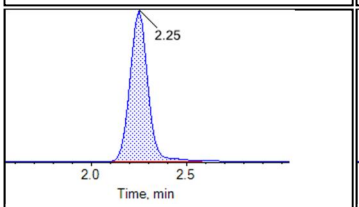
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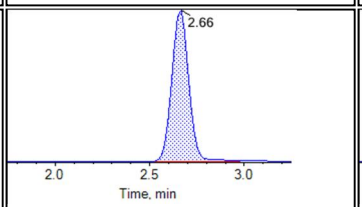
d5-EtFOSAA



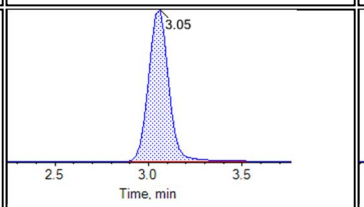
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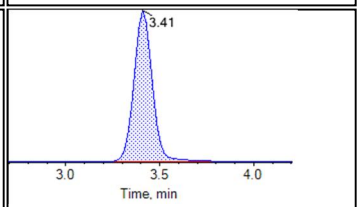
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13C8-PFOA



13C9-PFNA

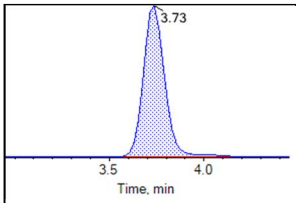


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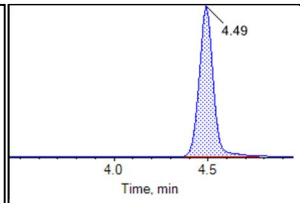
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Chromatogram Report

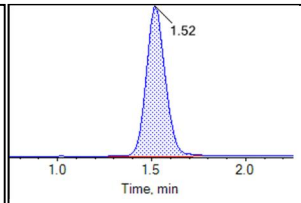
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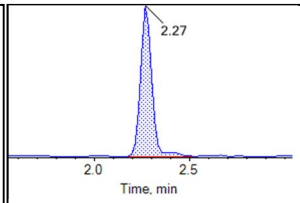
13C7-PFUnA



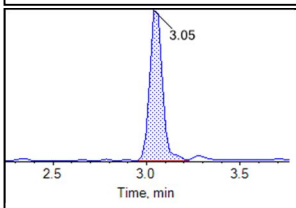
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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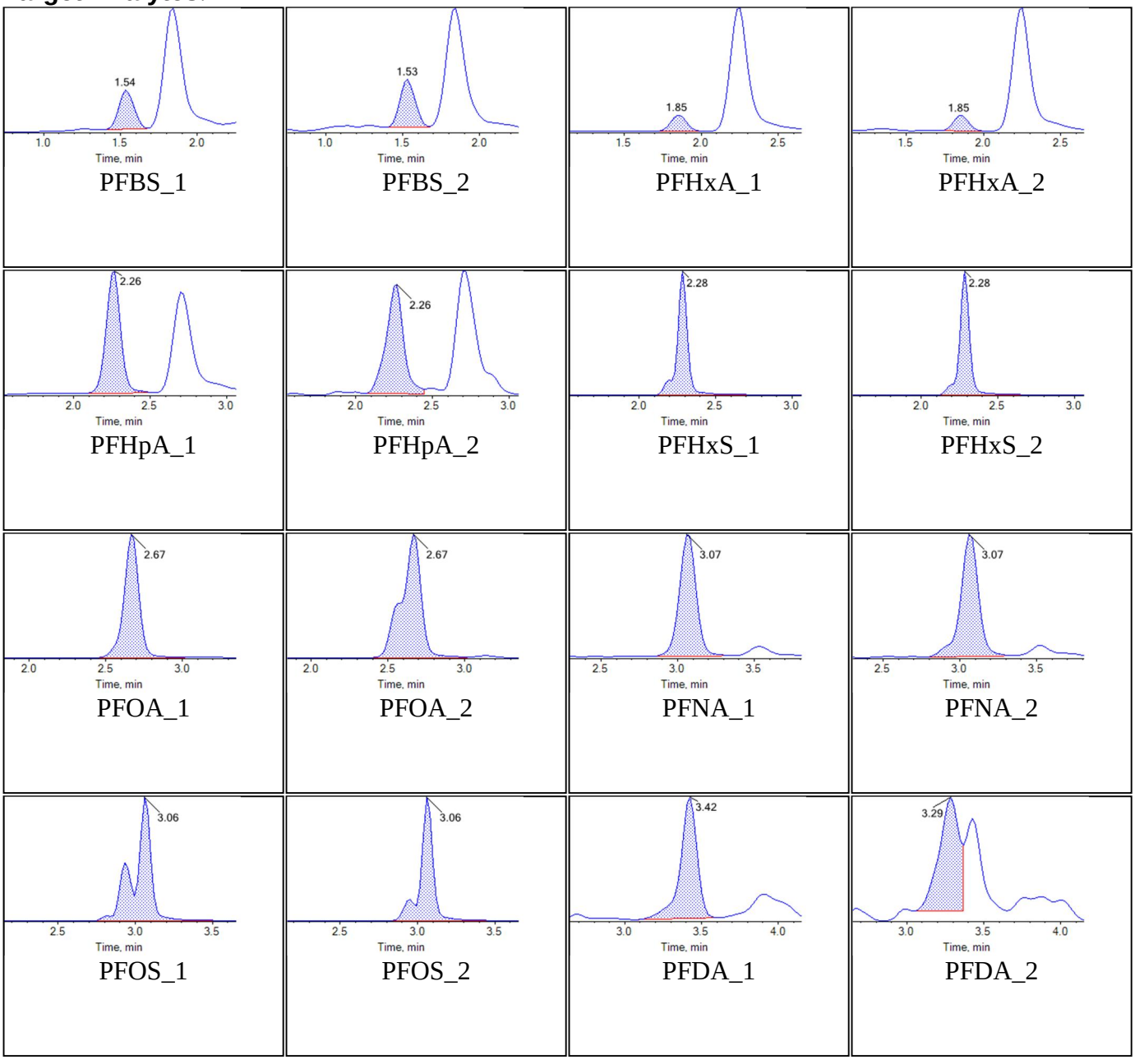
Chromatogram Report

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Printed: 17/10/2018 12:21:35 PM

Sample Name	J8403-FS(3)	**Injection Vial**	41
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:18:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

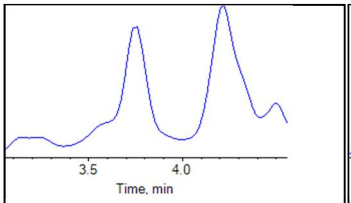
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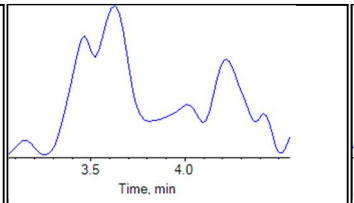
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Chromatogram Report

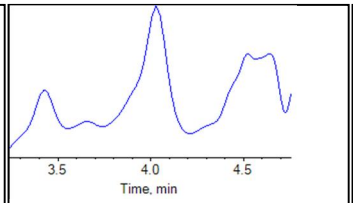
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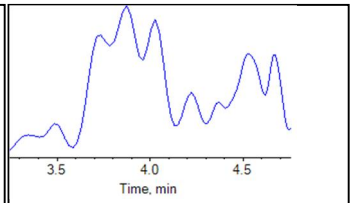
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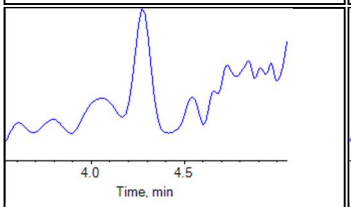
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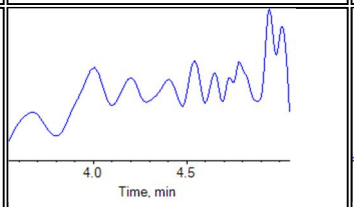
PFDoA_1



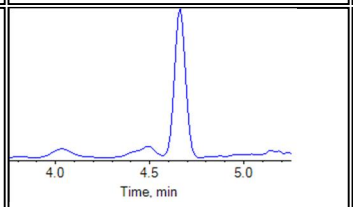
PFDoA_2



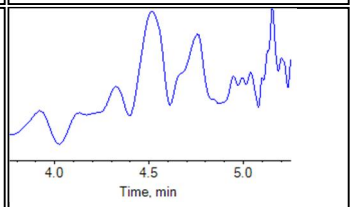
PFTrDA_1



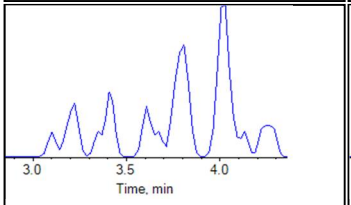
PFTrDA_2



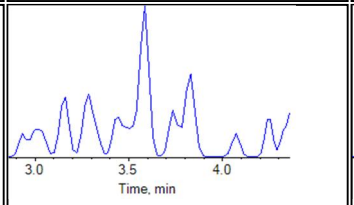
PFTeDA_1



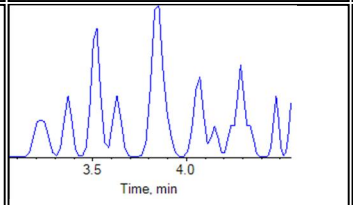
PFTeDA_2



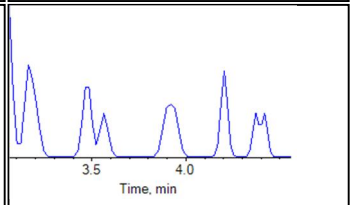
NMeFOSAA_1



NMeFOSAA_2

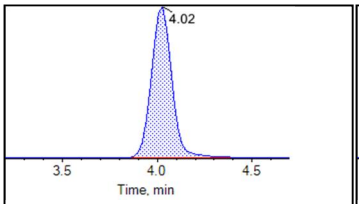


NEtFOSAA_1

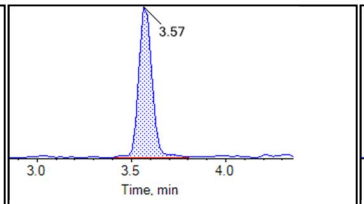


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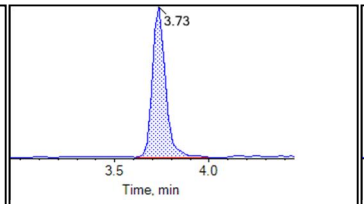
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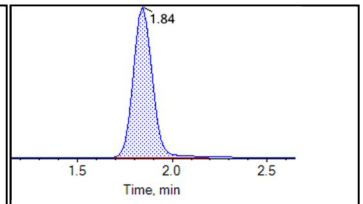
13C2-PFDoA



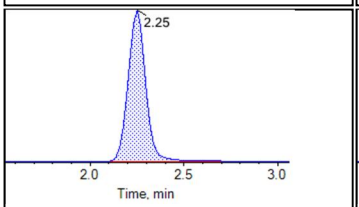
d3-MeFOSAA



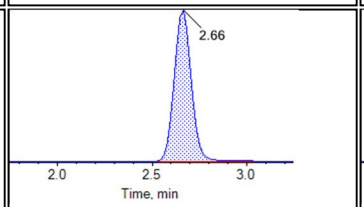
d5-EtFOSAA



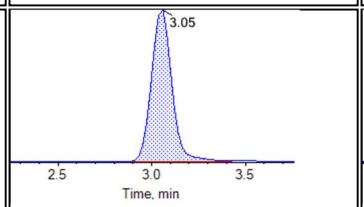
13C5-PFHxA



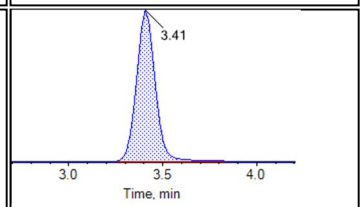
13C4-PFHpA



13C8-PFOA



13C9-PFNA

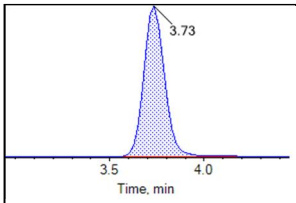


13C6-PFDA

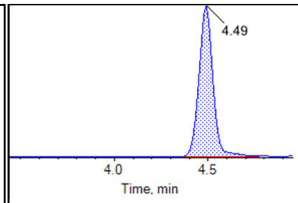
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Chromatogram Report

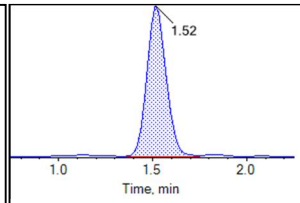
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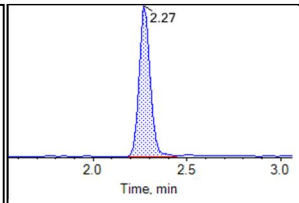
13C7-PFUnA



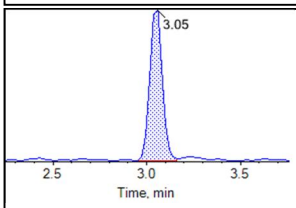
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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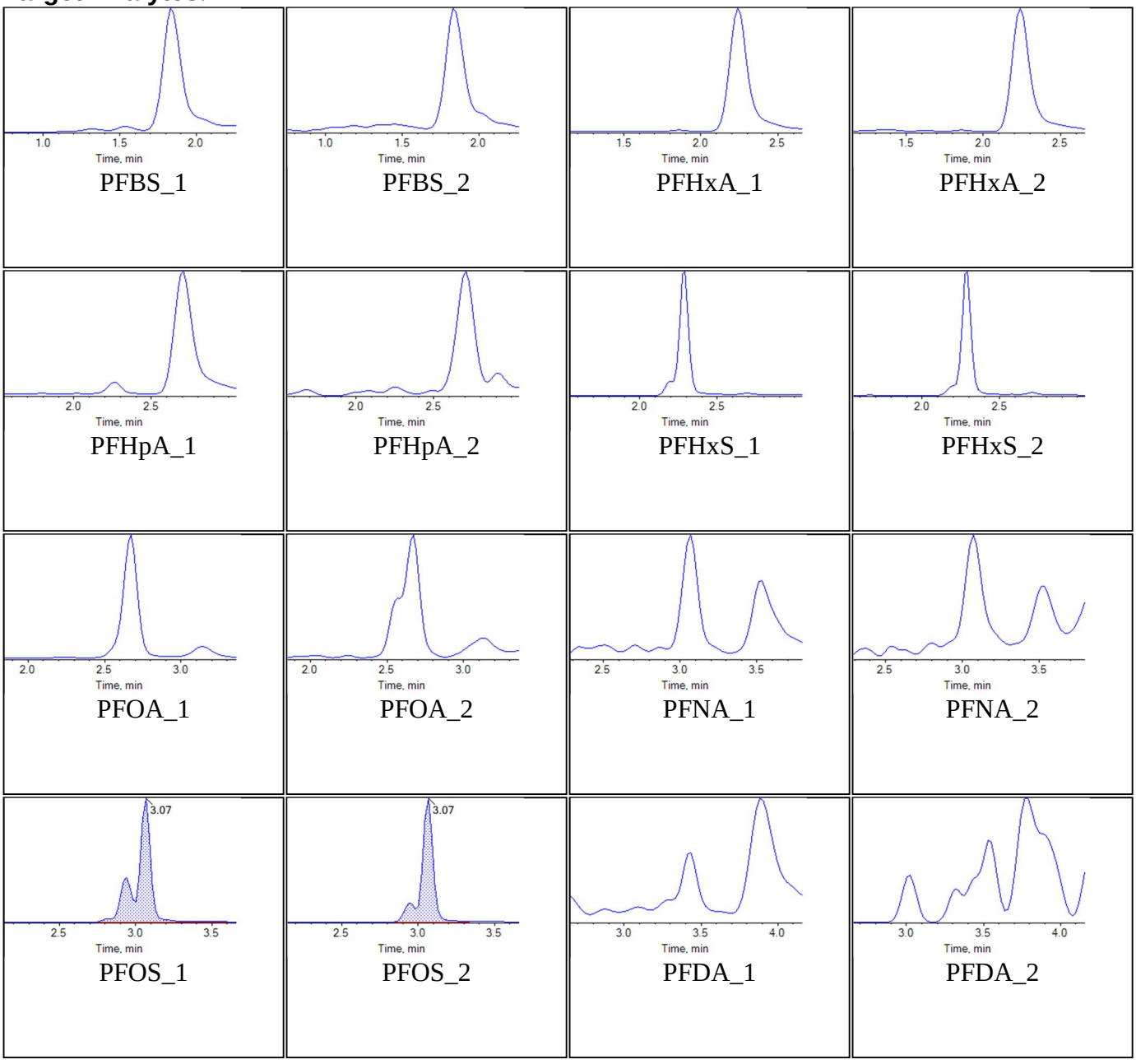
Chromatogram Report

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Sample Name	J8403-FS-D(5)	**Injection Vial**	42
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:29:05	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

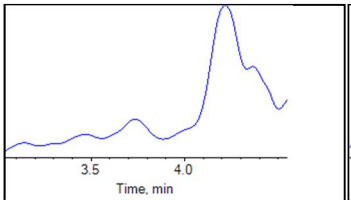
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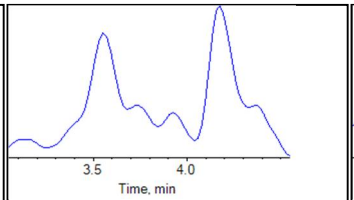
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Chromatogram Report

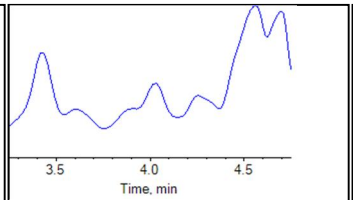
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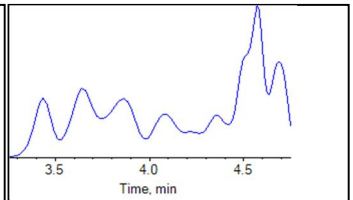
PFUnA_1



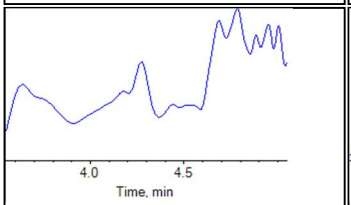
PFUnA_2



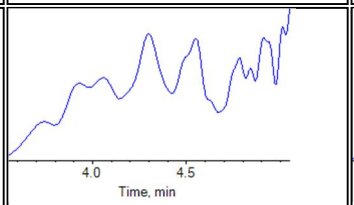
PFDoA_1



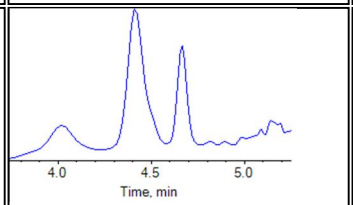
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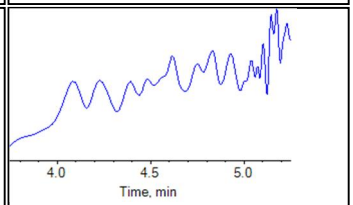
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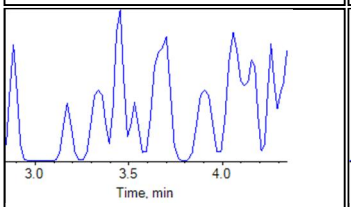
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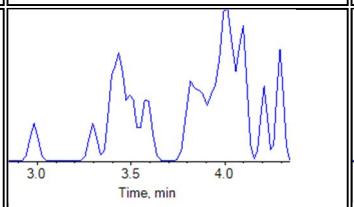
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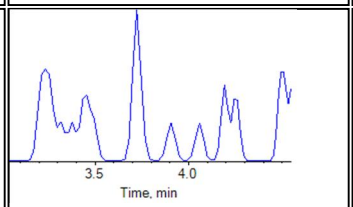
PFTeDA_2



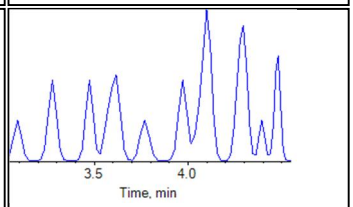
NMeFOSAA_1



NMeFOSAA_2

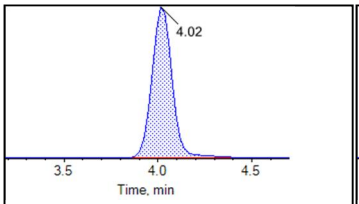


NEtFOSAA_1

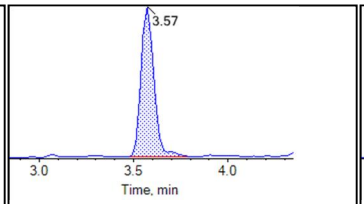


NEtFOSAA_2

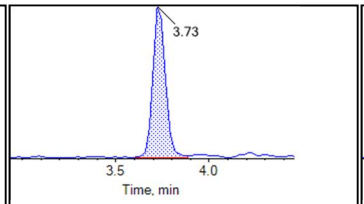
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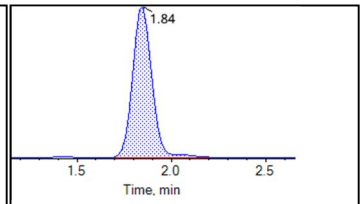
13C2-PFDoA



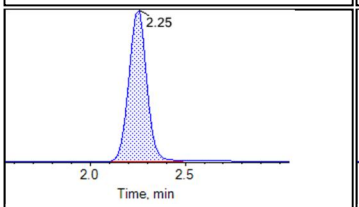
d3-MeFOSAA



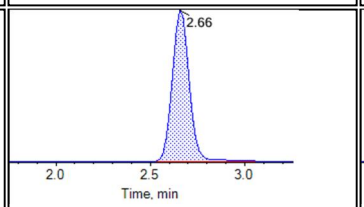
d5-EtFOSAA



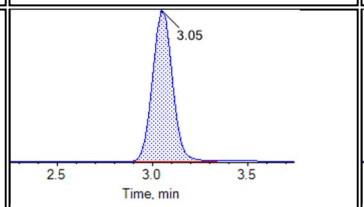
13C5-PFHxA



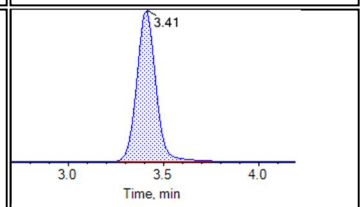
13C4-PFHpA



13C8-PFOA



13C9-PFNA

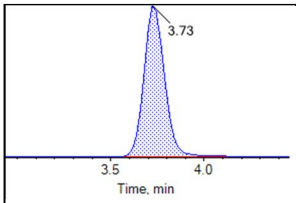


13C6-PFDA

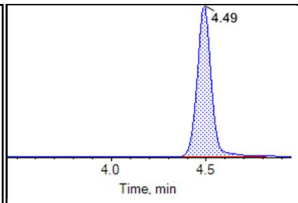
BATTELLE

Chromatogram Report

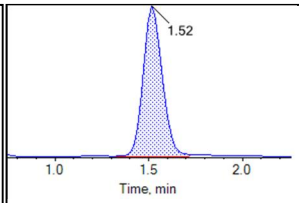
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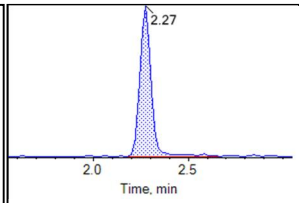
13C7-PFUnA



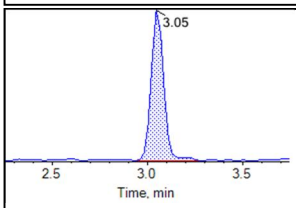
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13C3-PFBS



13C3-PFHxS



13C8-PFOS

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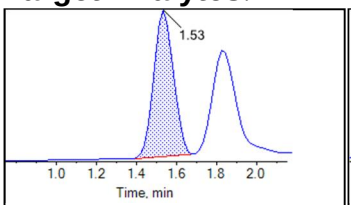
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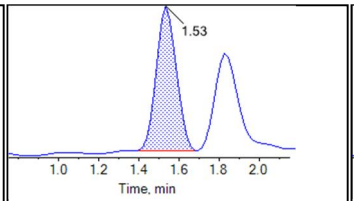
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Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:39:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

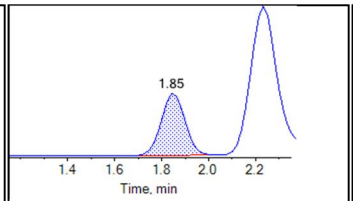
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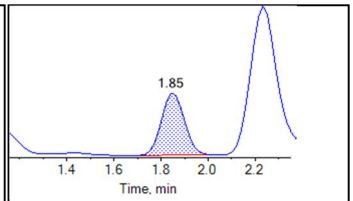
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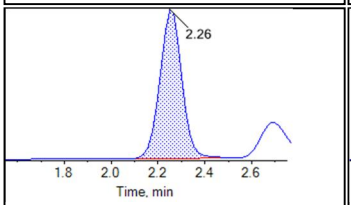
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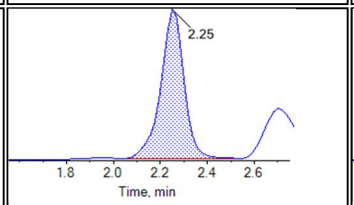
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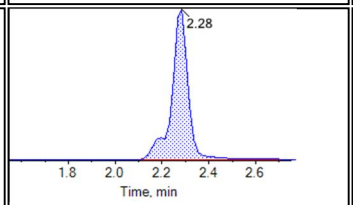
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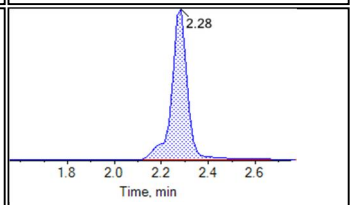
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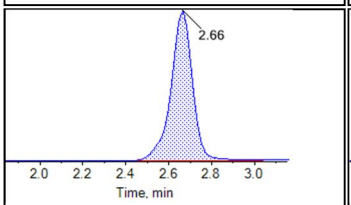
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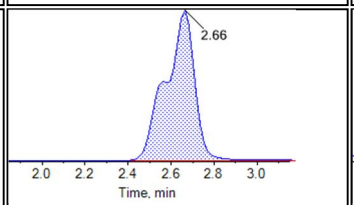
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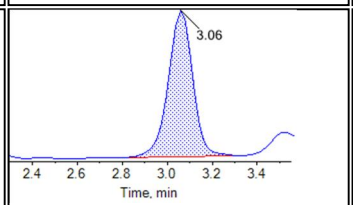
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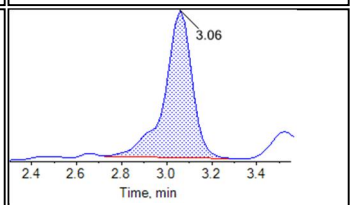
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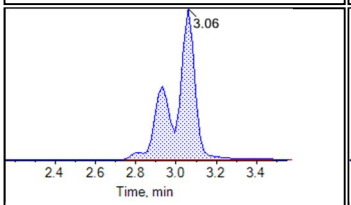
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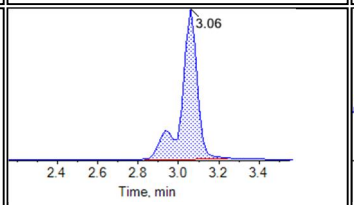
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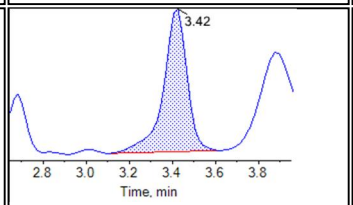
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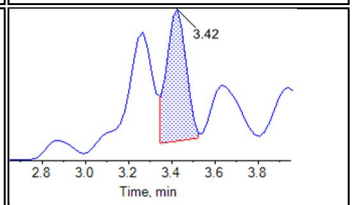
PFOS_1



PFOS_2



PFDA_1

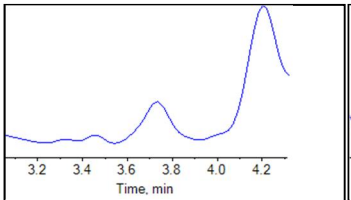


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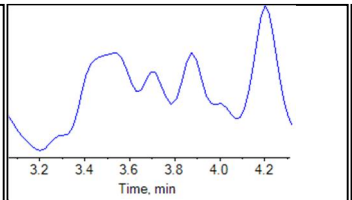
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Chromatogram Report

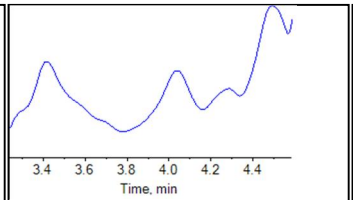
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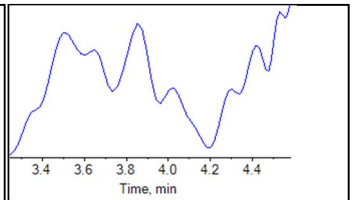
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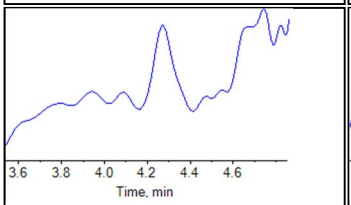
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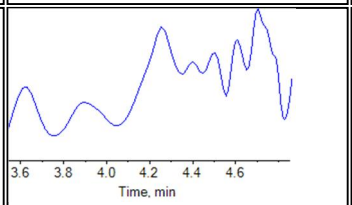
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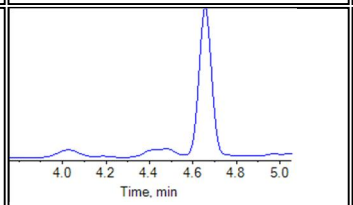
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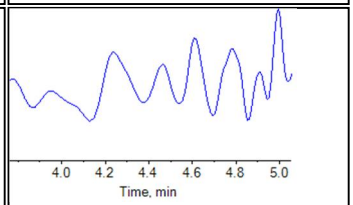
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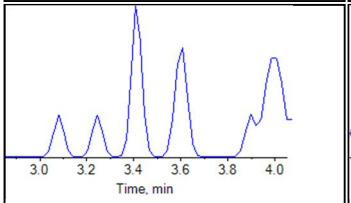
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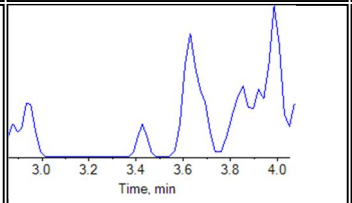
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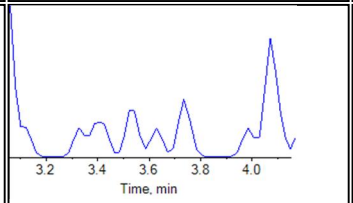
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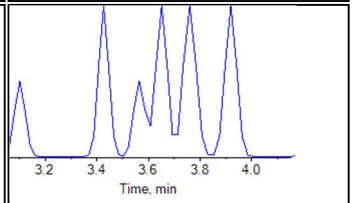
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NMeFOSAA_2

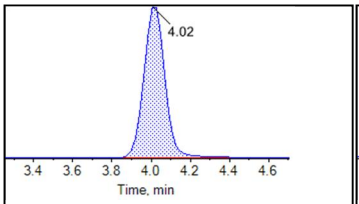


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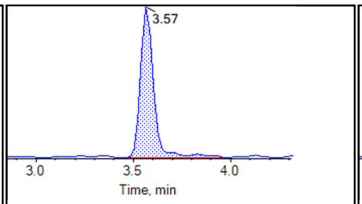


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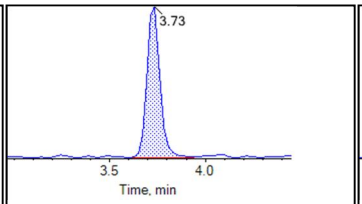
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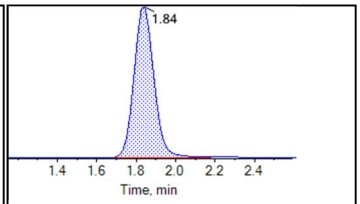
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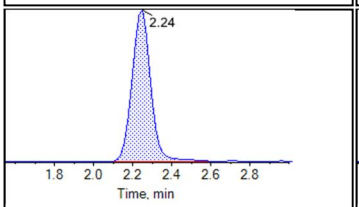
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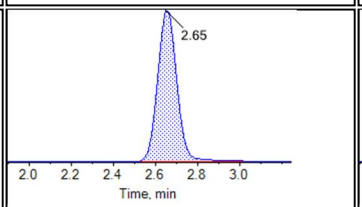
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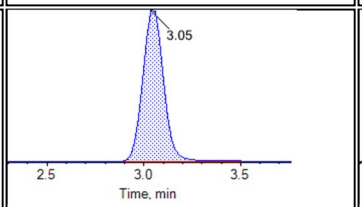
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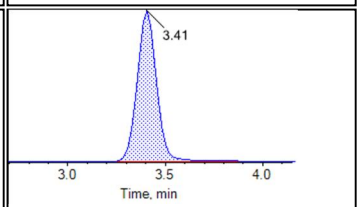
13C4-PFHpA



13C8-PFOA



13C9-PFNA

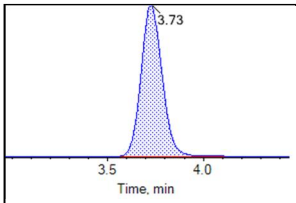


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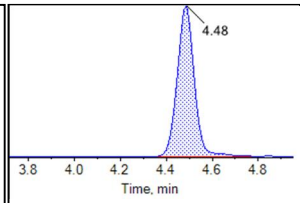
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Chromatogram Report

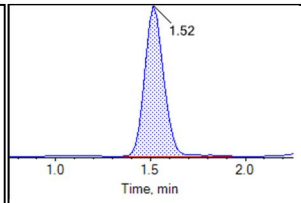
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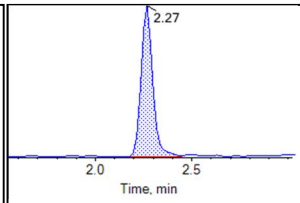
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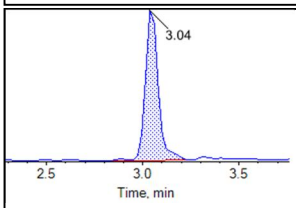
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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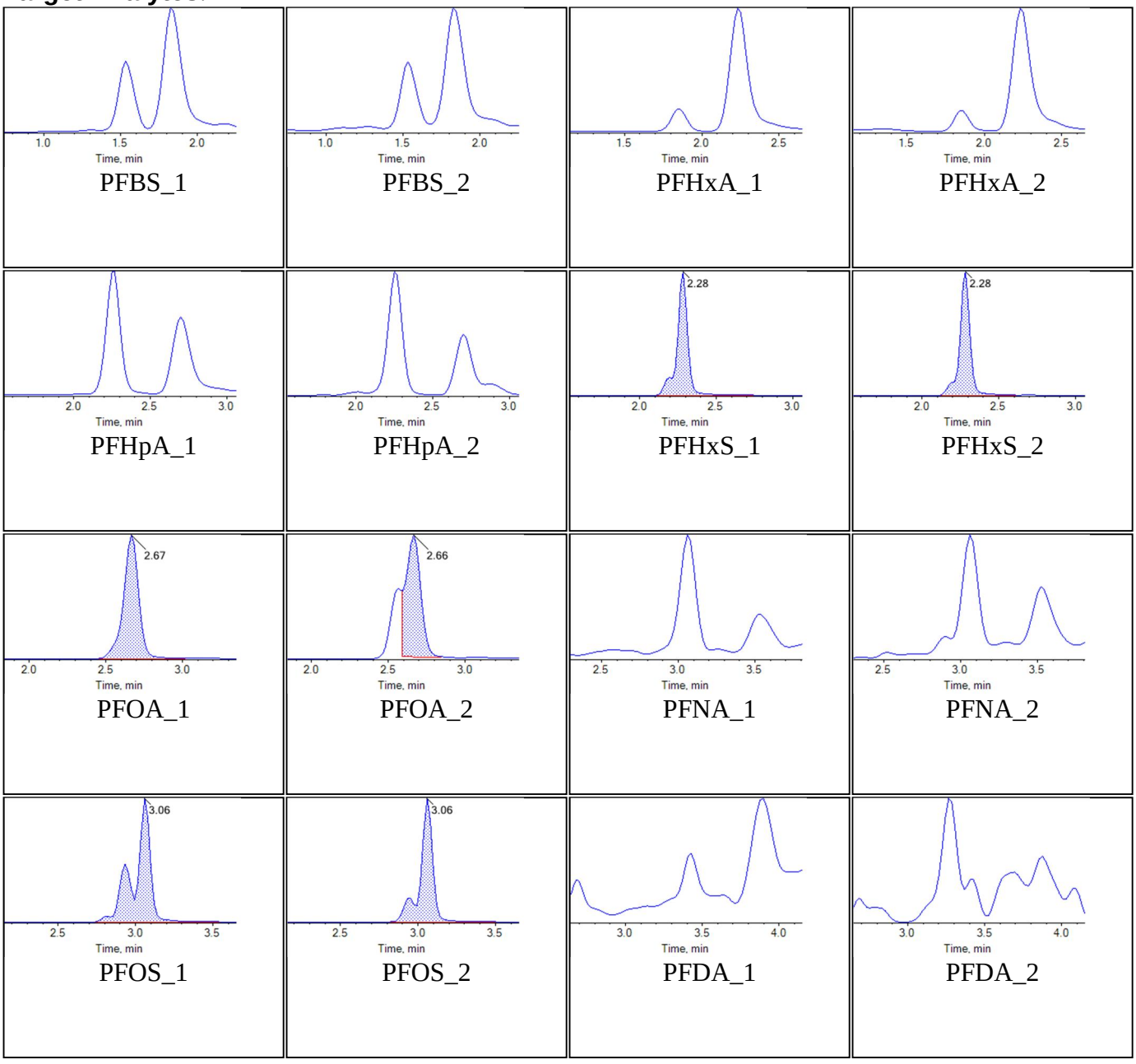
Chromatogram Report

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Sample Name	J8404-FS-D(5)	**Injection Vial**	44
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:50:48	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

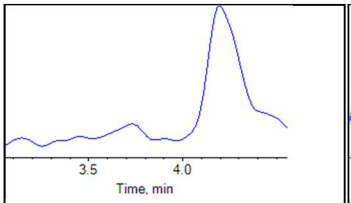
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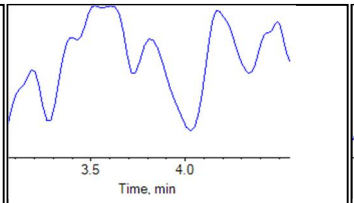
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Chromatogram Report

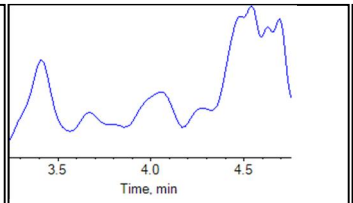
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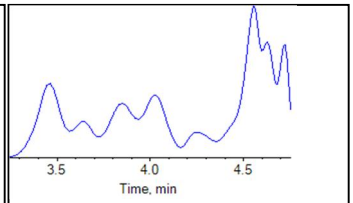
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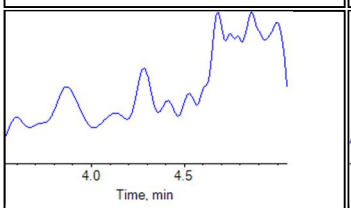
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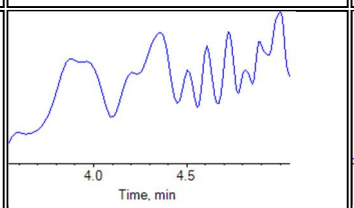
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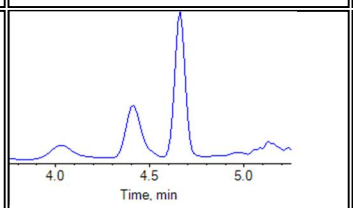
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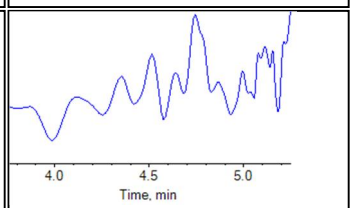
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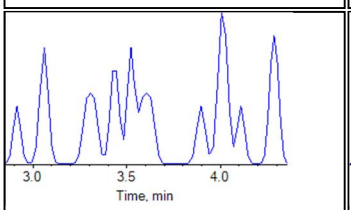
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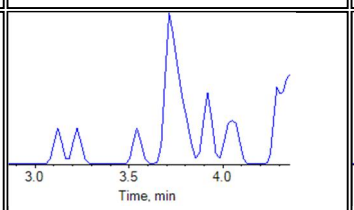
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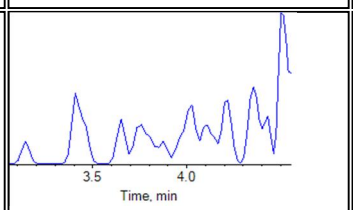
PFTeDA_2



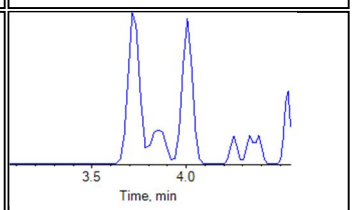
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NMeFOSAA_2

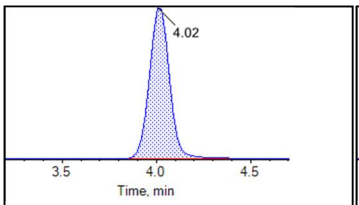


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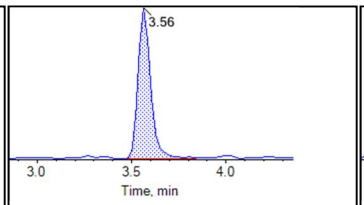


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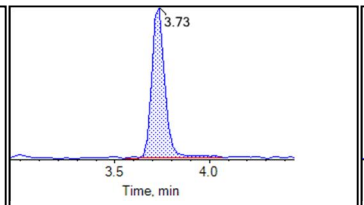
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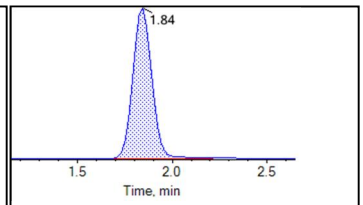
13C2-PFDoA



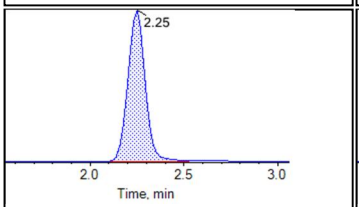
d3-MeFOSAA



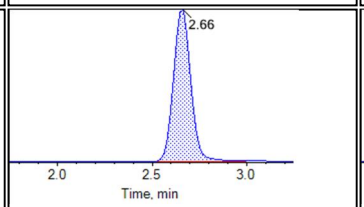
d5-EtFOSAA



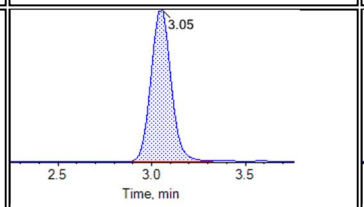
13C5-PFHxA



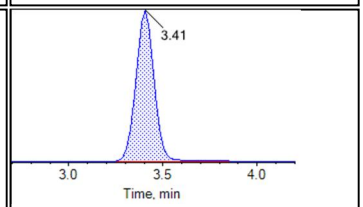
13C4-PFHpA



13C8-PFOA



13C9-PFNA

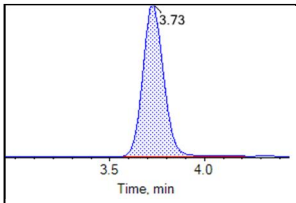


13C6-PFDA

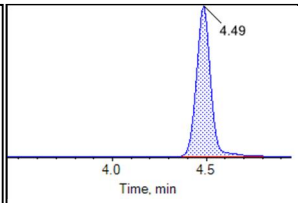
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Chromatogram Report

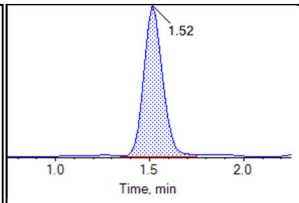
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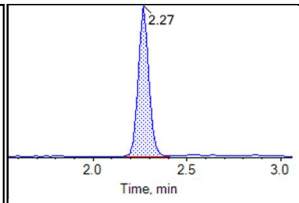
13C7-PFUnA



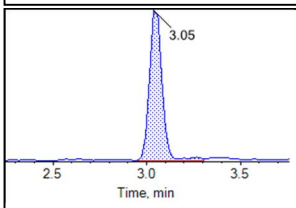
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

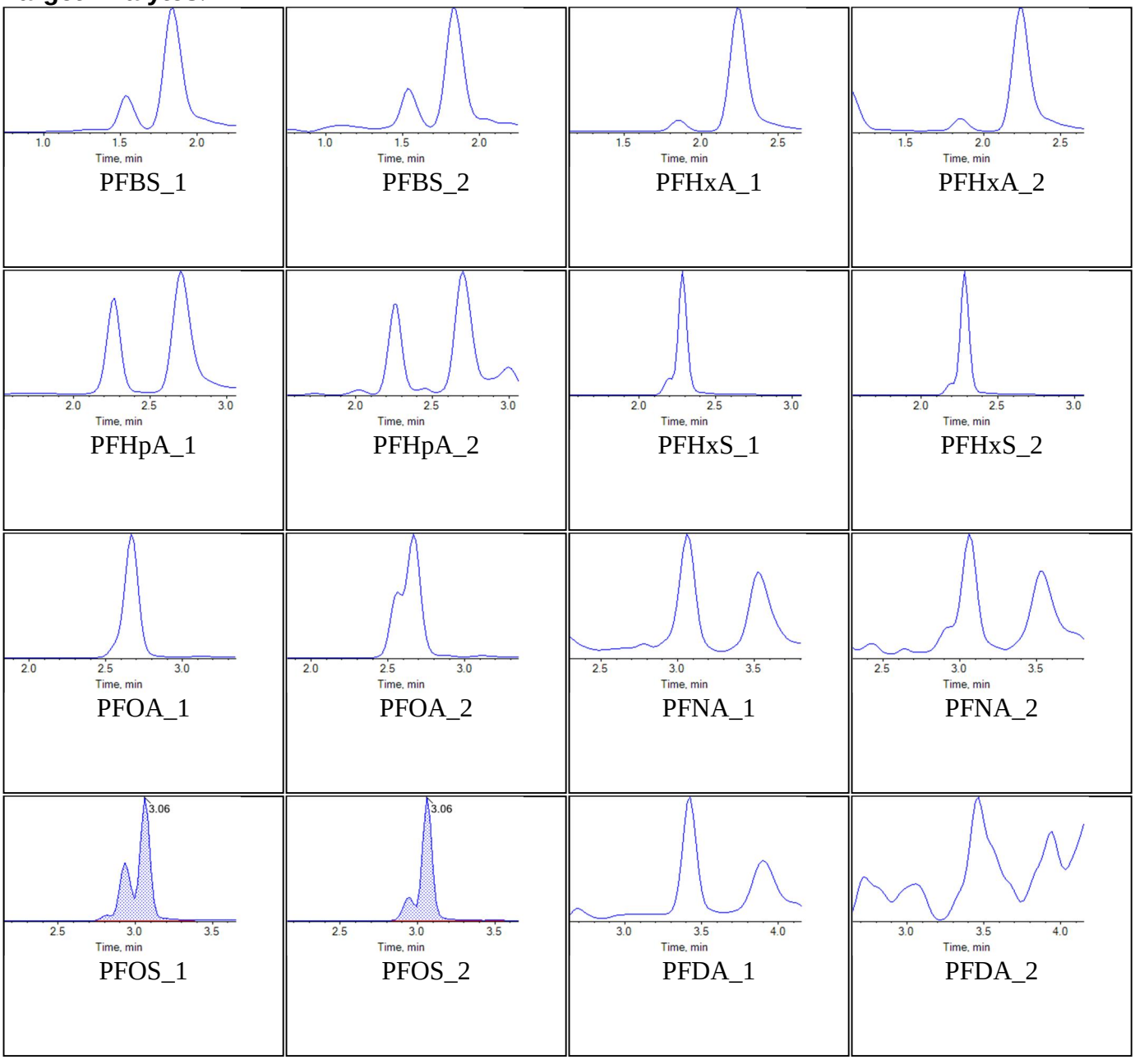
Chromatogram Report

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Printed: 17/10/2018 12:21:59 PM

Sample Name	J8404-FS-D(7)	**Injection Vial**	45
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:01:40	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

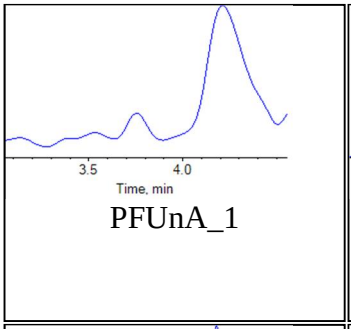
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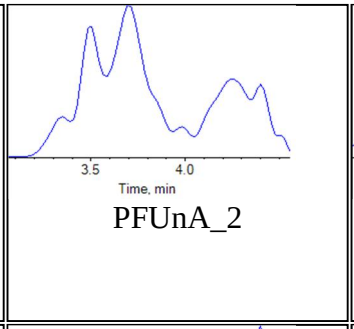
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Chromatogram Report

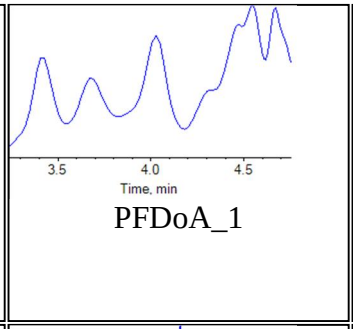
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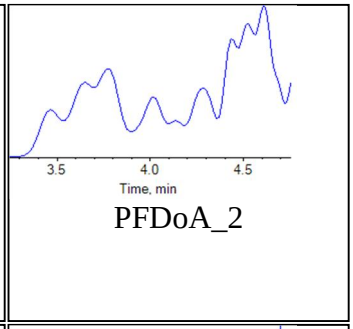
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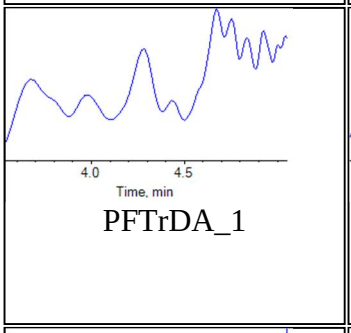
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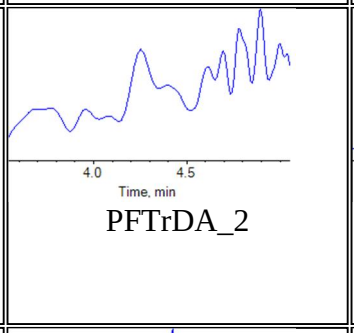
PFDoA_1



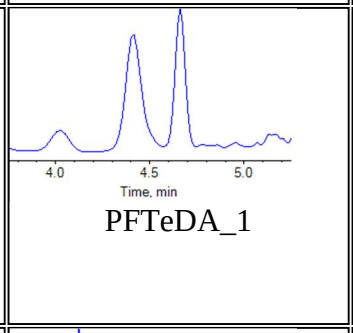
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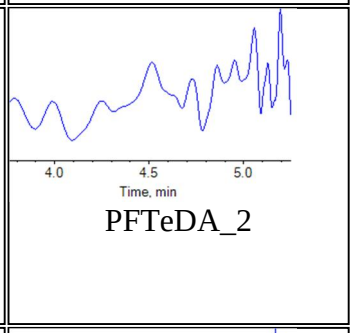
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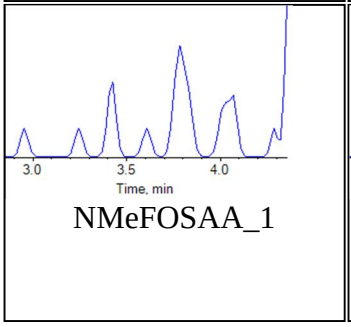
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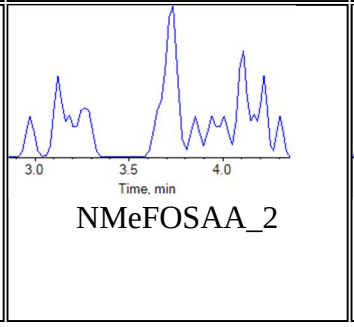
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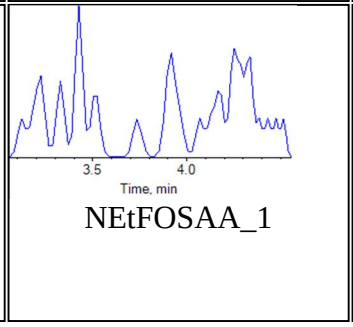
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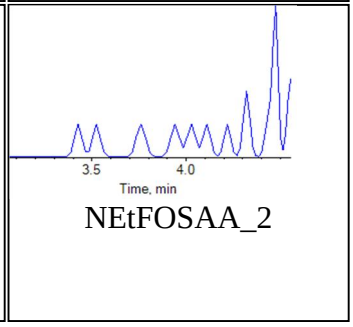
NMeFOSAA_1



NMeFOSAA_2

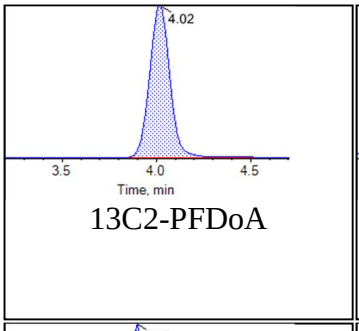


NEtFOSAA_1

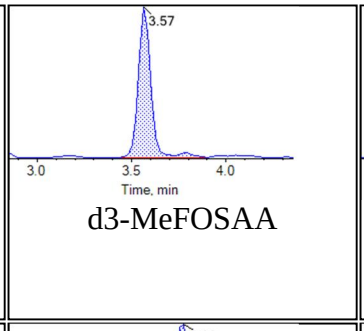


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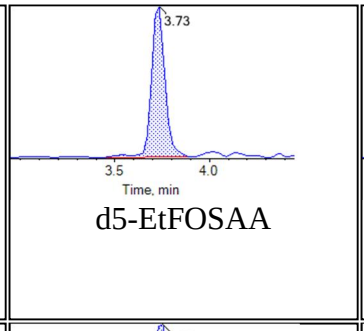
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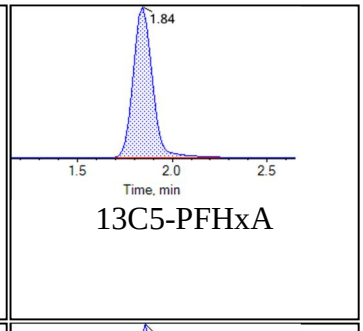
13C2-PFDoA



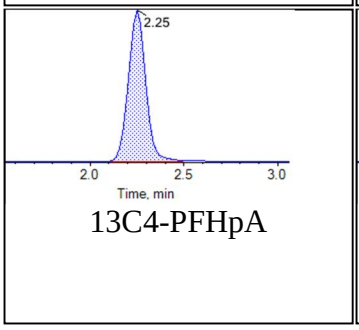
d3-MeFOSAA



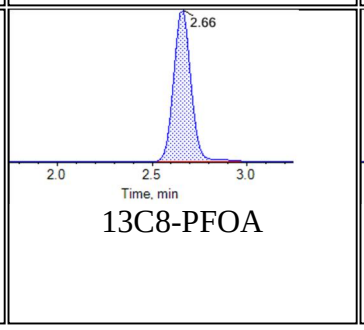
d5-EtFOSAA



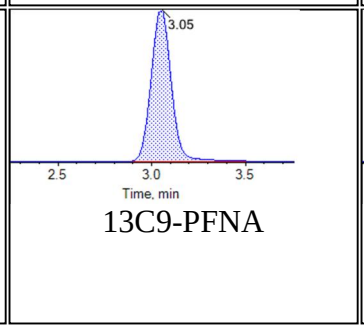
13C5-PFHxA



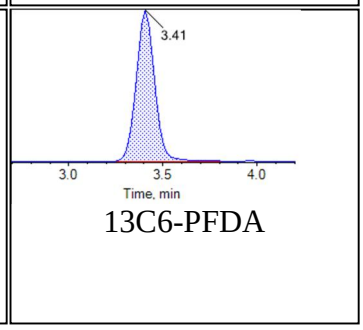
13C4-PFHpA



13C8-PFOA



13C9-PFNA

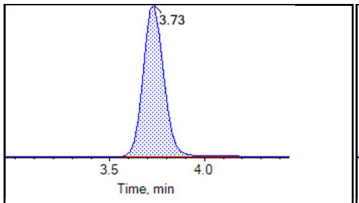


13C6-PFDA

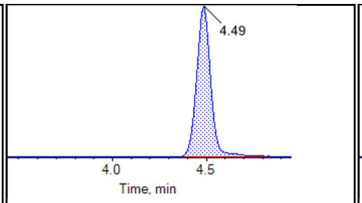
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Chromatogram Report

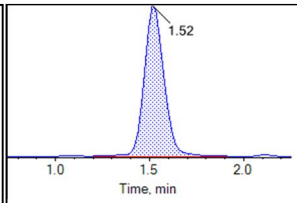
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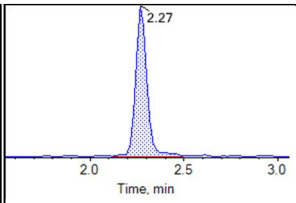
13C7-PFUnA



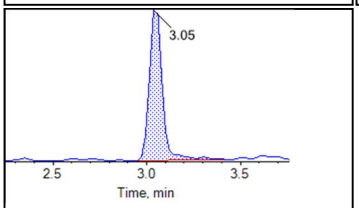
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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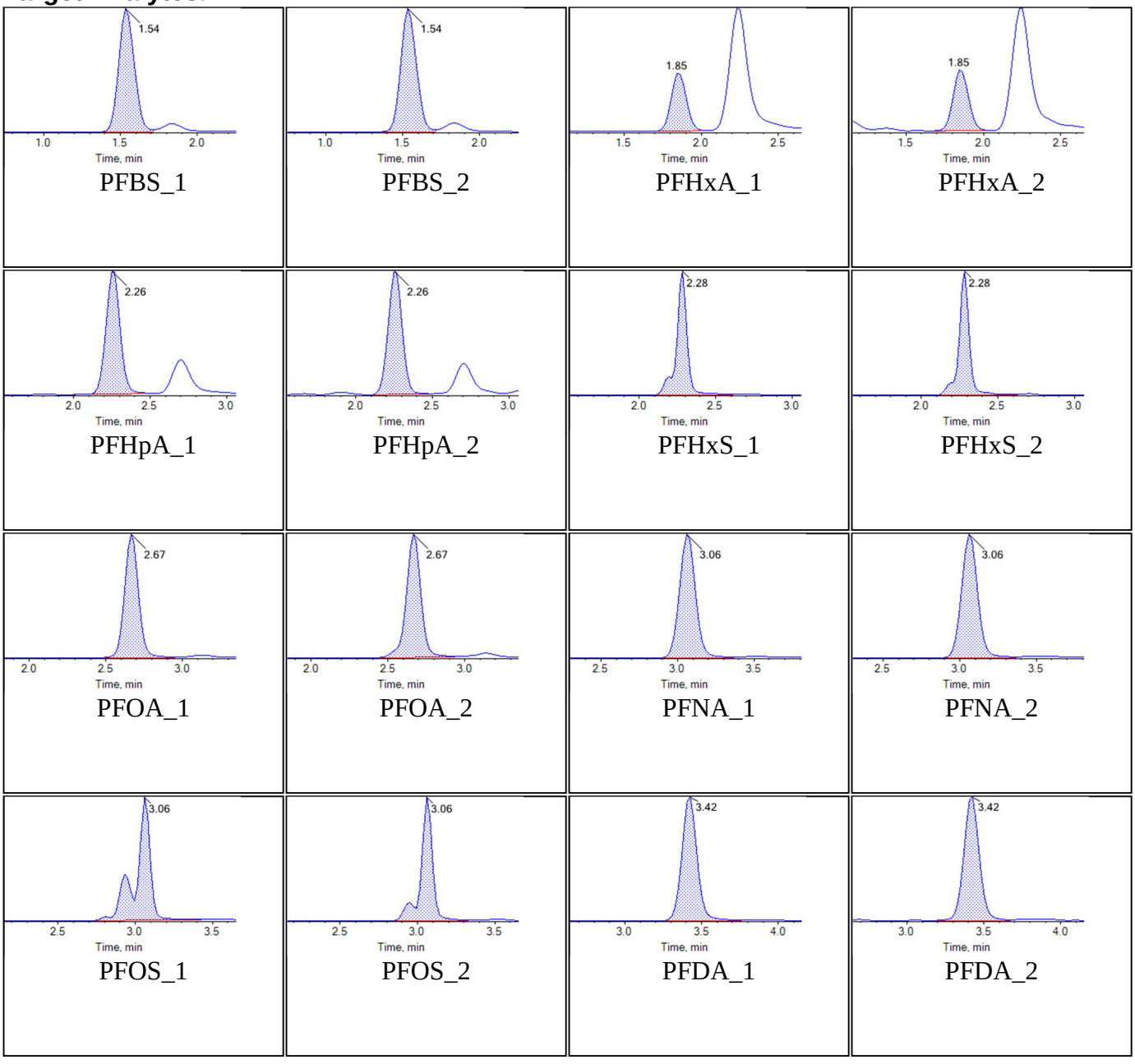
Chromatogram Report

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Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

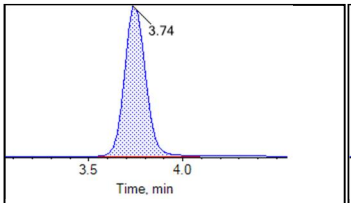
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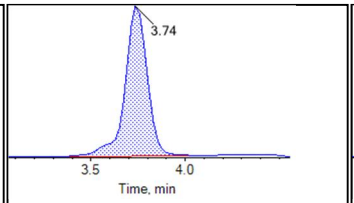
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Chromatogram Report

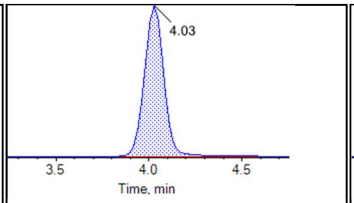
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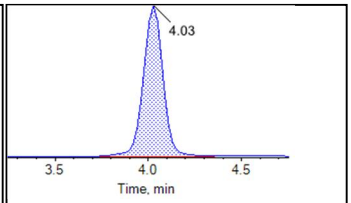
PFUnA_1



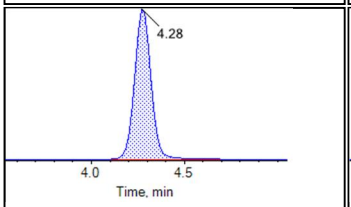
PFUnA_2



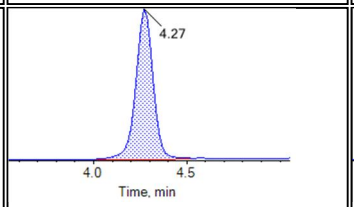
PFDoA_1



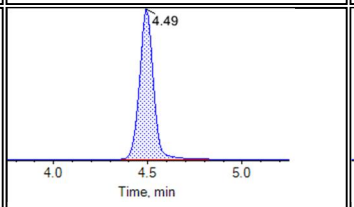
PFDoA_2



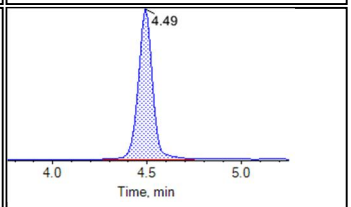
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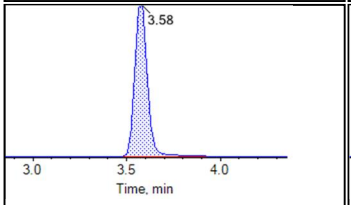
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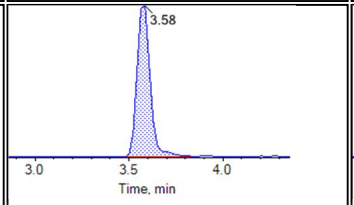
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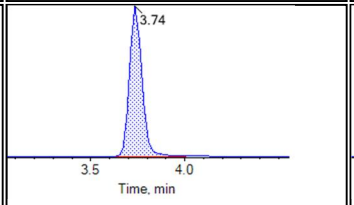
PFTeDA_2



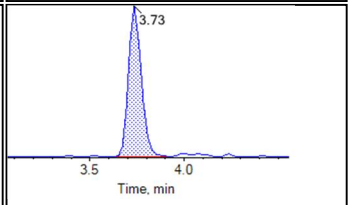
NMeFOSAA_1



NMeFOSAA_2

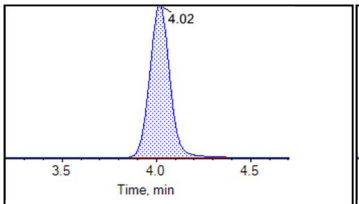


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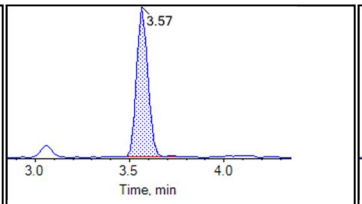


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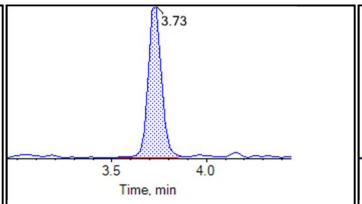
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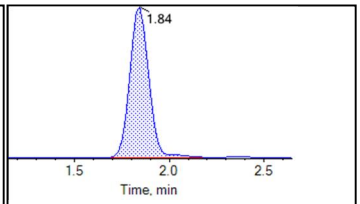
13C2-PFDoA



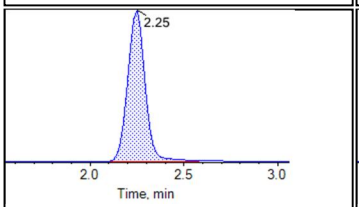
d3-MeFOSAA



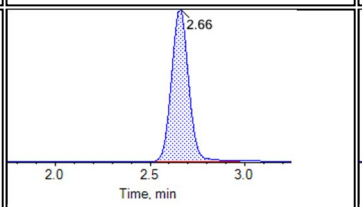
d5-EtFOSAA



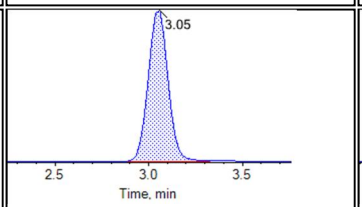
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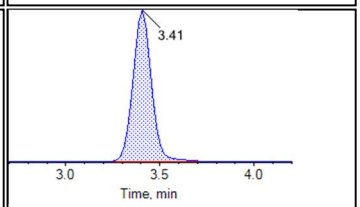
13C4-PFHpA



13C8-PFOA



13C9-PFNA

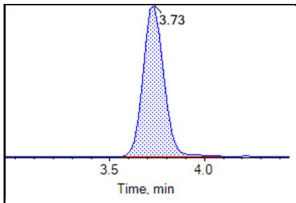


13C6-PFDA

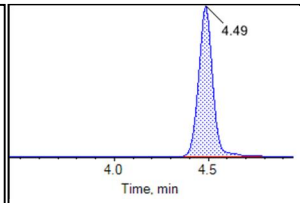
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Chromatogram Report

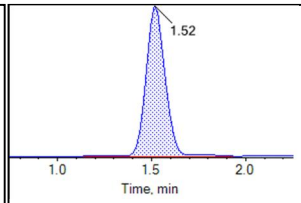
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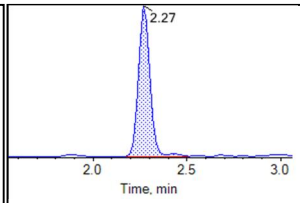
13C7-PFUnA



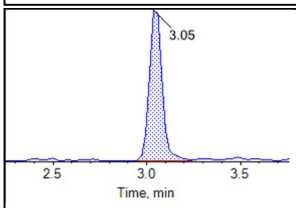
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

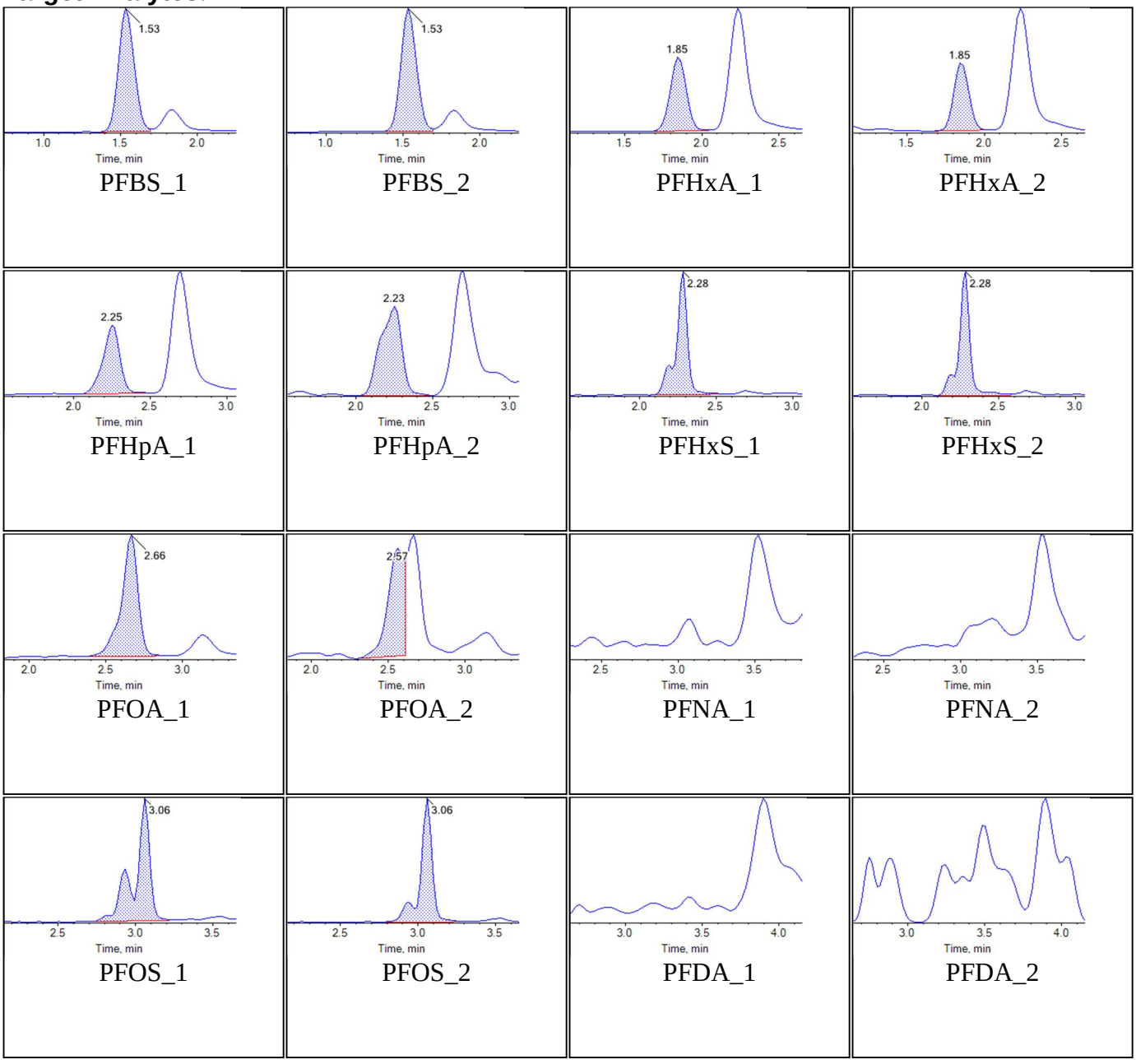
Chromatogram Report

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Printed: 17/10/2018 12:22:35 PM

Sample Name	J8405-FS(3)	**Injection Vial**	48
Sample ID	VC-AOC16-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:34:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

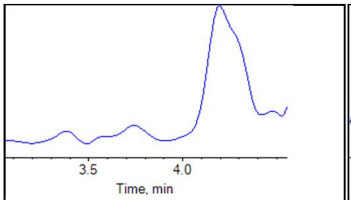
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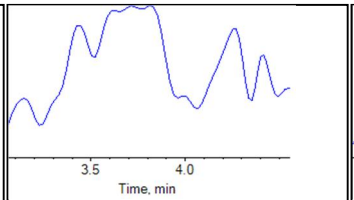
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Chromatogram Report

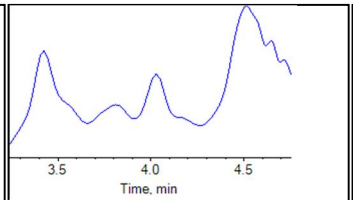
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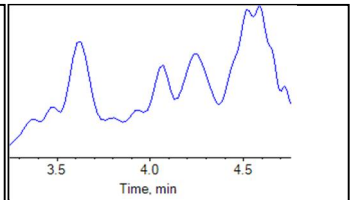
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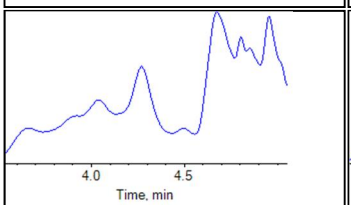
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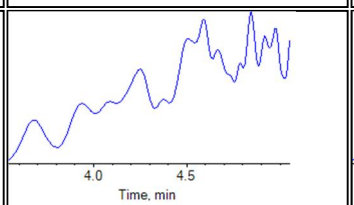
PFDoA_1



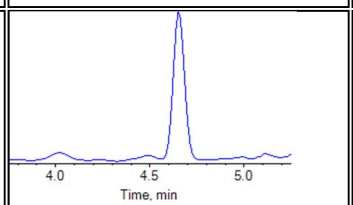
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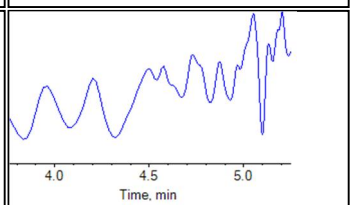
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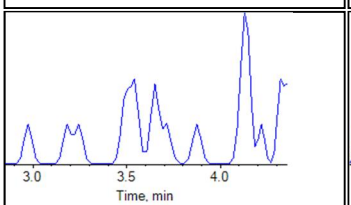
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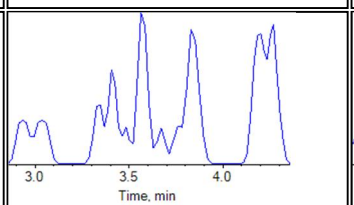
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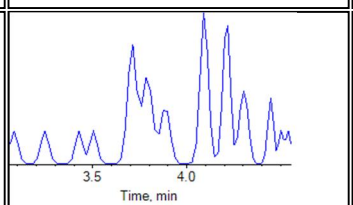
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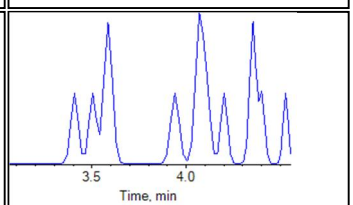
NMeFOSAA_1



NMeFOSAA_2

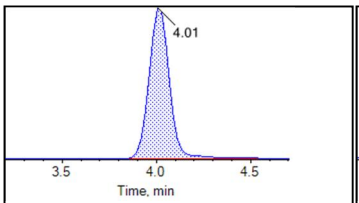


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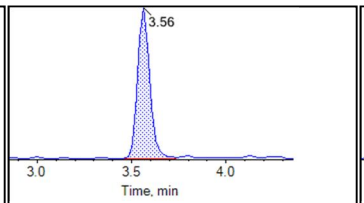


NEtFOSAA_2

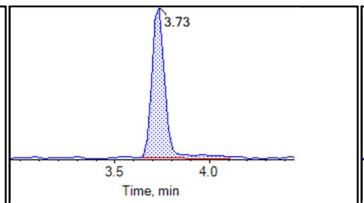
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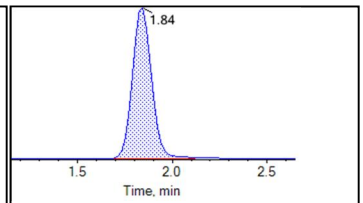
13C2-PFDoA



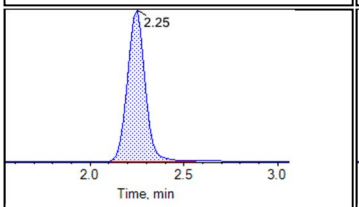
d3-MeFOSAA



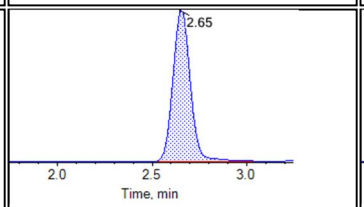
d5-EtFOSAA



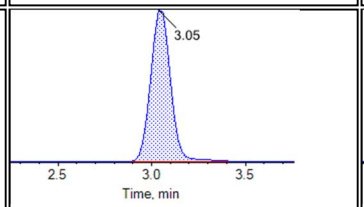
13C5-PFHxA



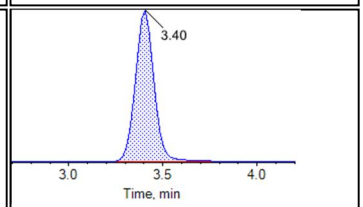
13C4-PFHpA



13C8-PFOA



13C9-PFNA

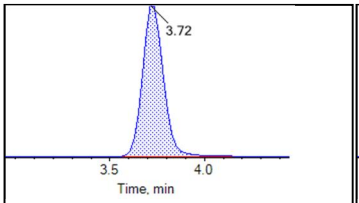


13C6-PFDA

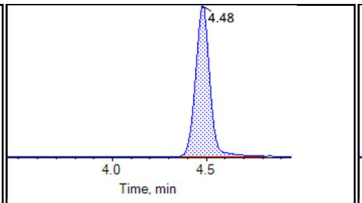
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Chromatogram Report

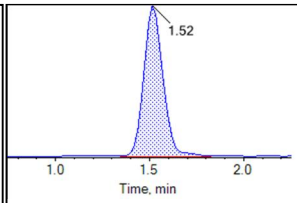
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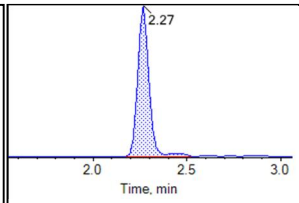
13C7-PFUnA



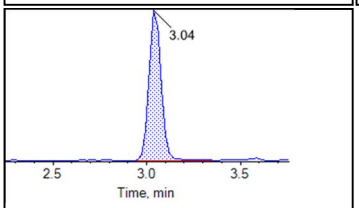
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

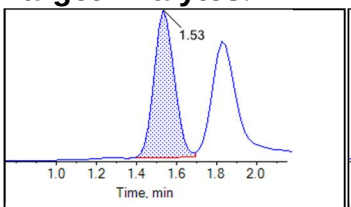
Chromatogram Report

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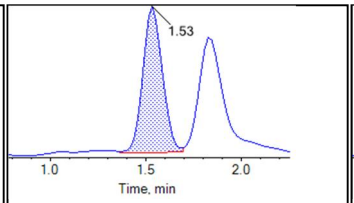
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Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:45:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

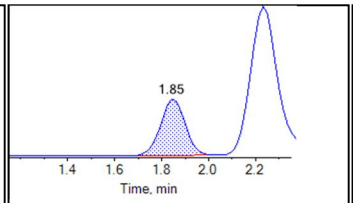
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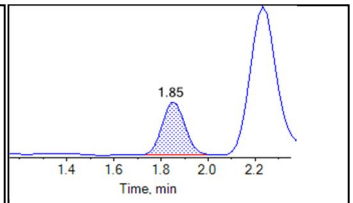
PFBS_1



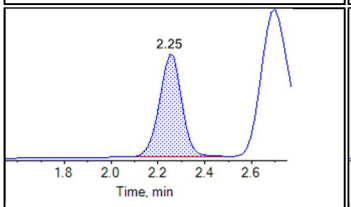
PFBS_2



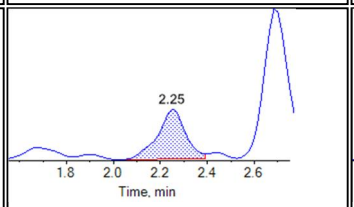
PFHxA_1



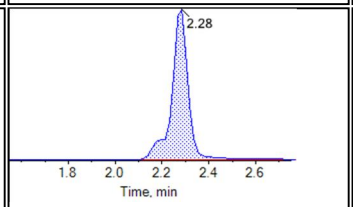
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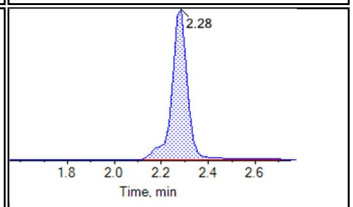
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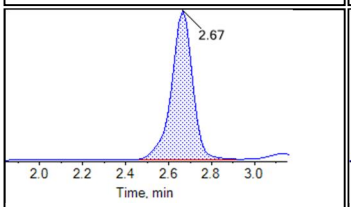
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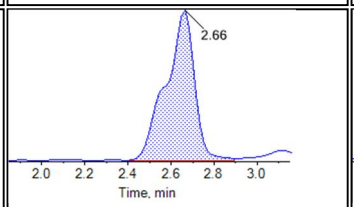
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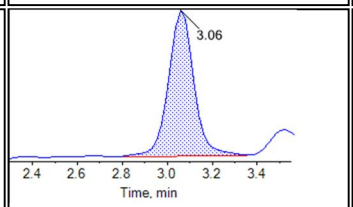
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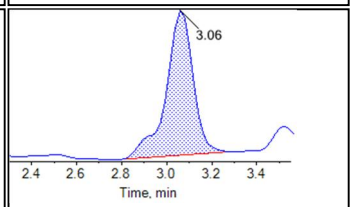
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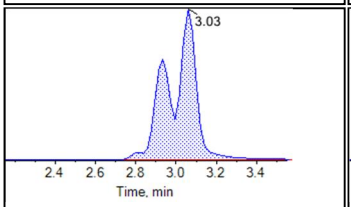
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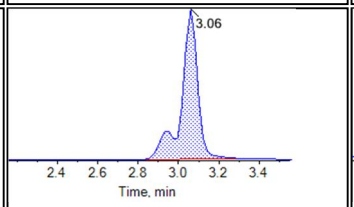
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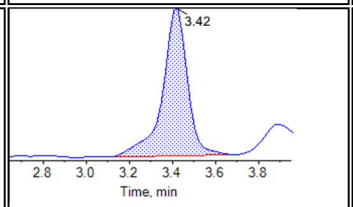
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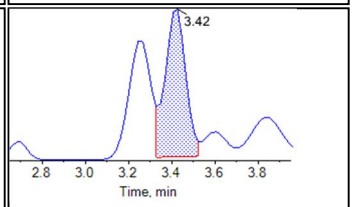
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PFOS_2



PFDA_1

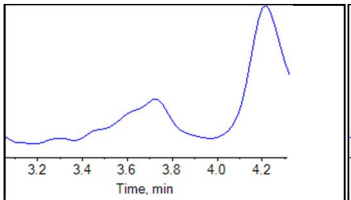


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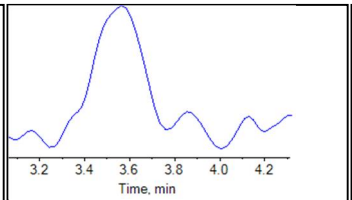
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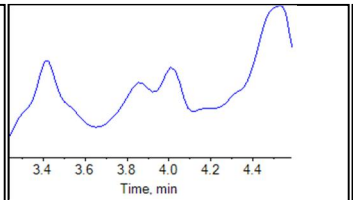
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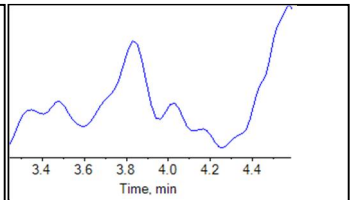
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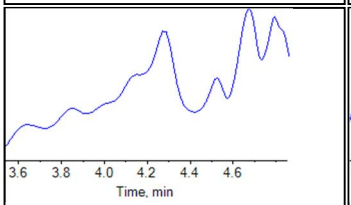
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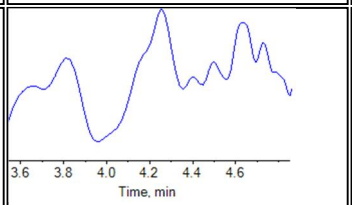
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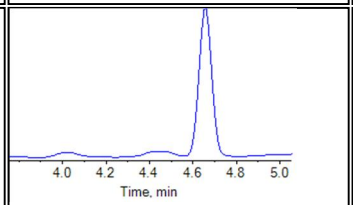
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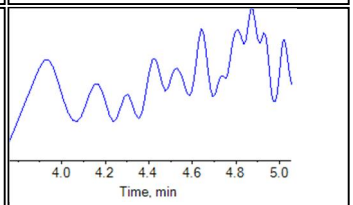
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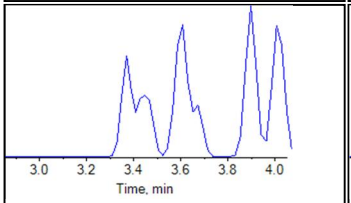
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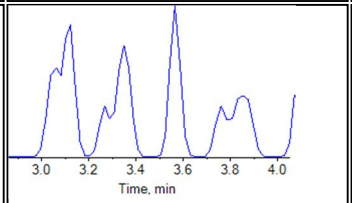
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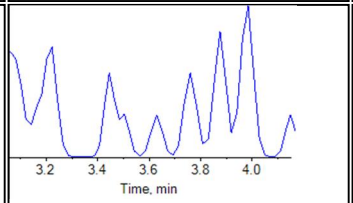
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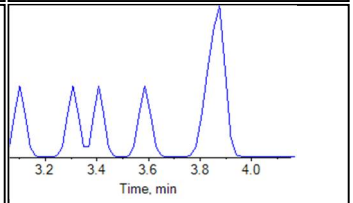
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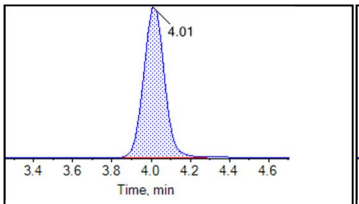


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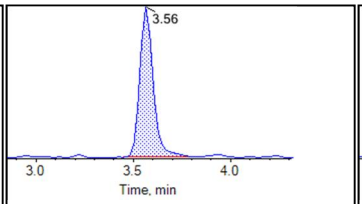


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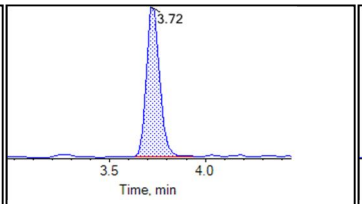
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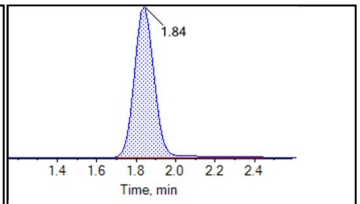
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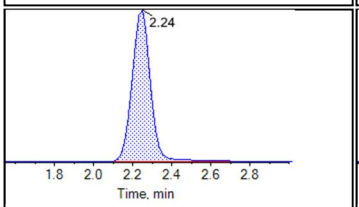
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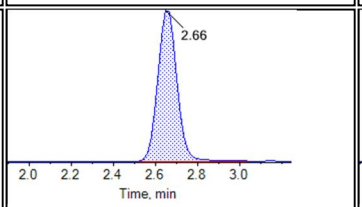
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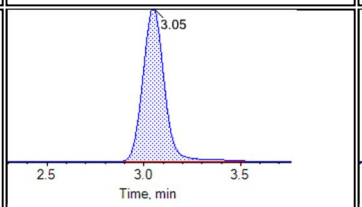
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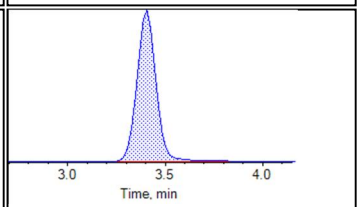
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13C8-PFOA



13C9-PFNA

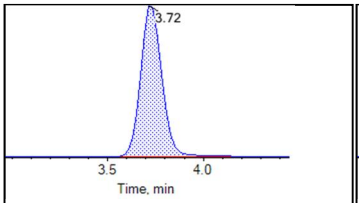


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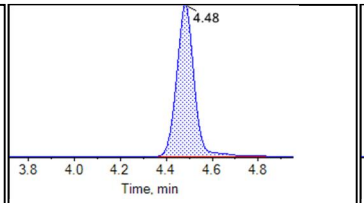
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Chromatogram Report

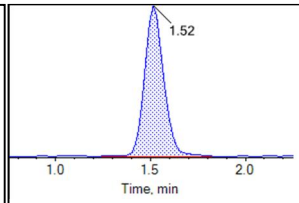
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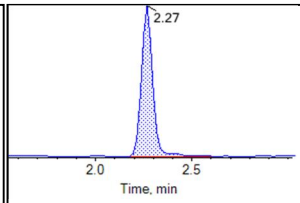
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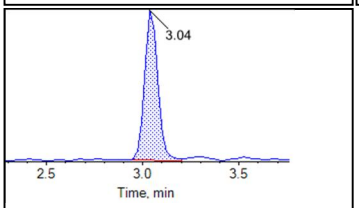
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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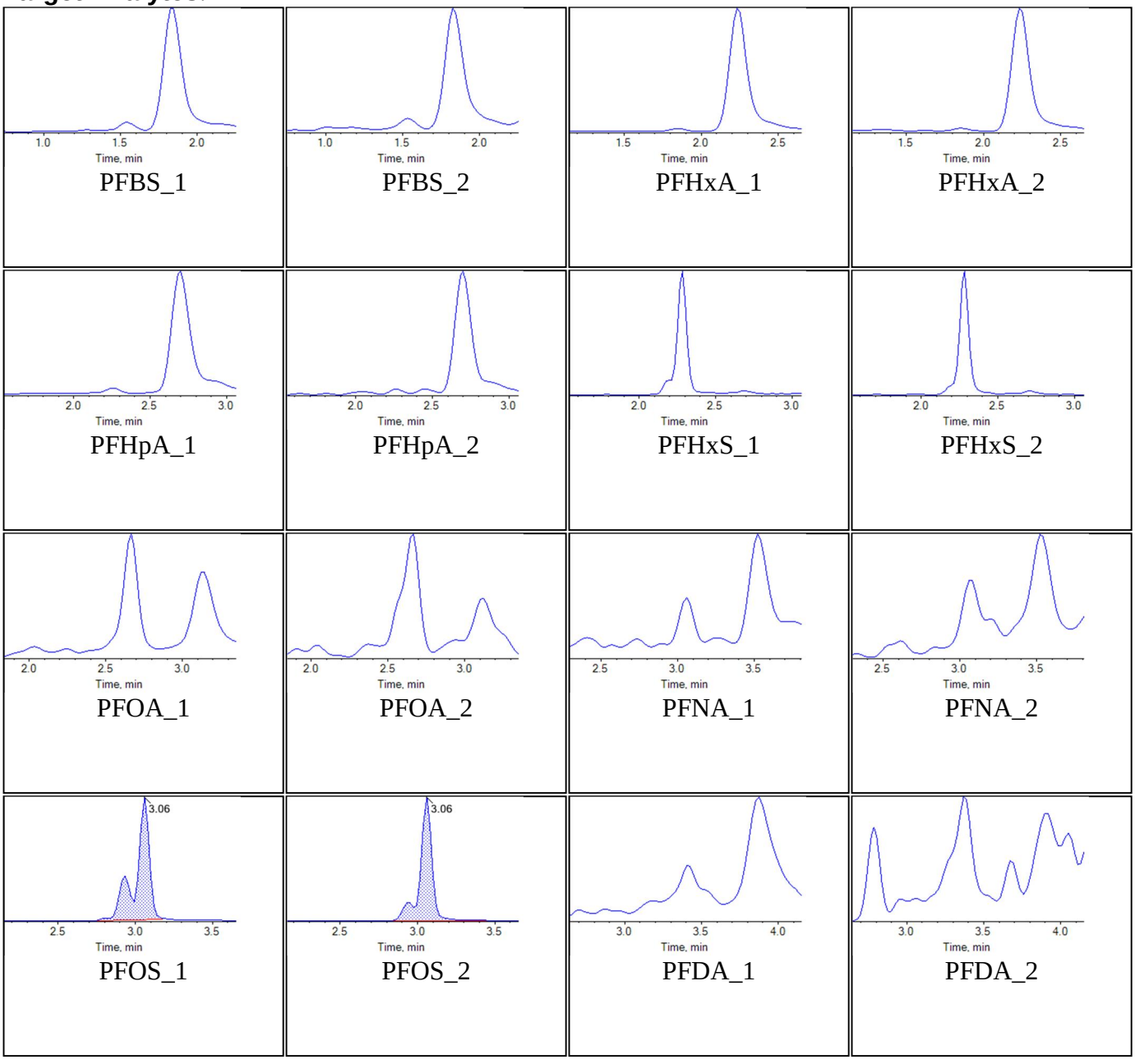
Chromatogram Report

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Sample Name	J8406-FS-D(5)	**Injection Vial**	50
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:55:58	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

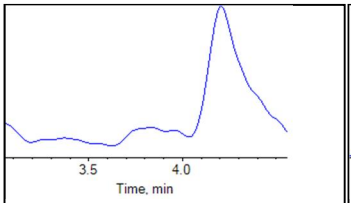
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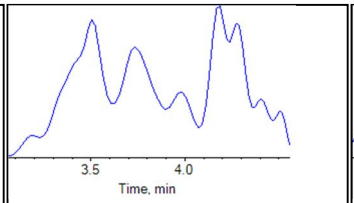
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Chromatogram Report

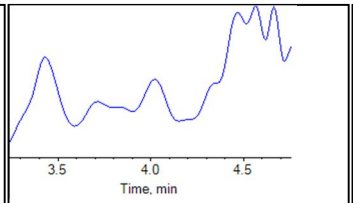
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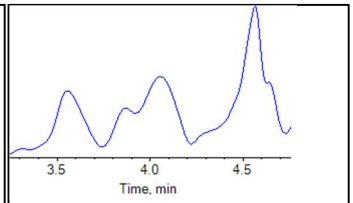
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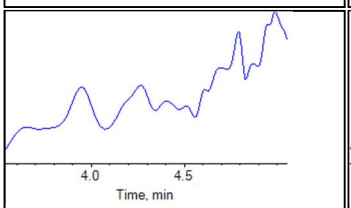
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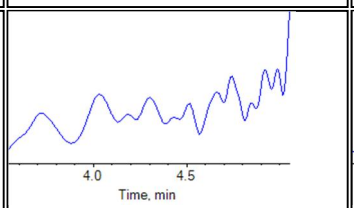
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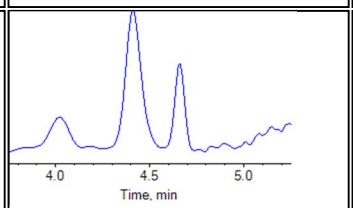
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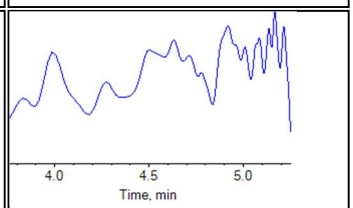
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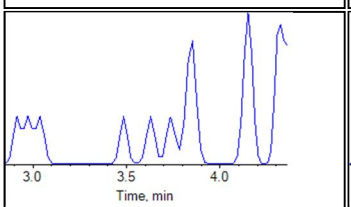
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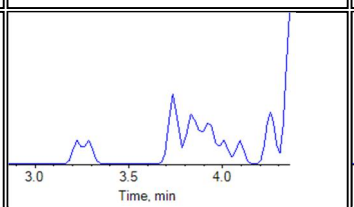
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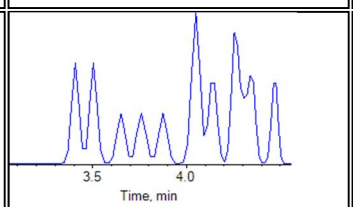
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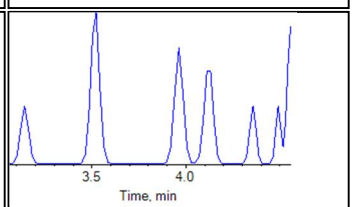
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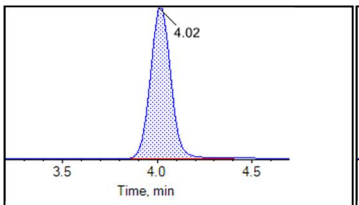


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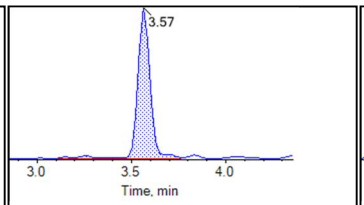


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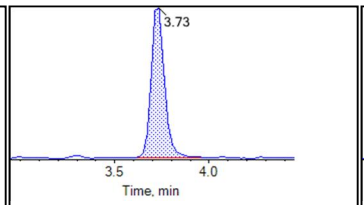
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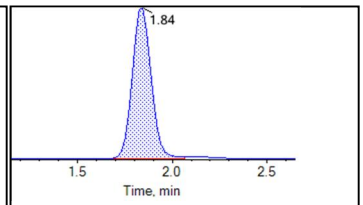
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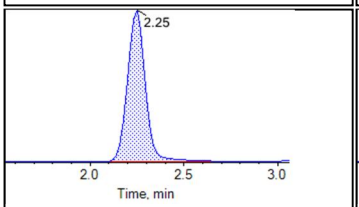
d3-MeFOSAA



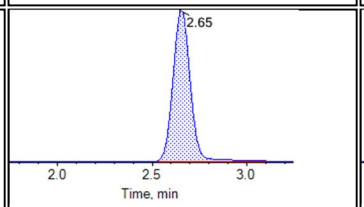
d5-EtFOSAA



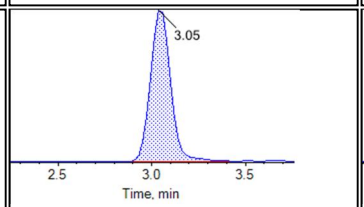
13C5-PFHxA



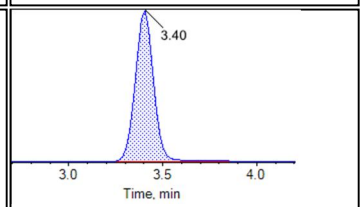
13C4-PFHpA



13C8-PFOA



13C9-PFNA

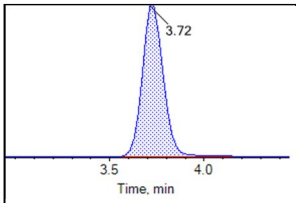


13C6-PFDA

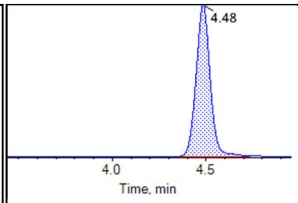
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Chromatogram Report

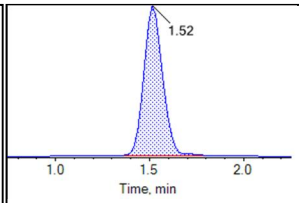
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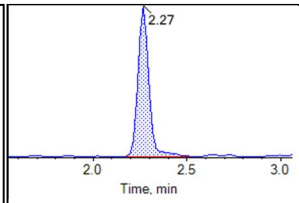
13C7-PFUnA



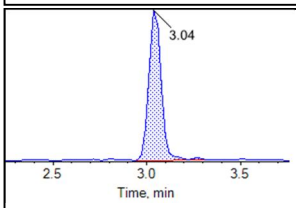
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

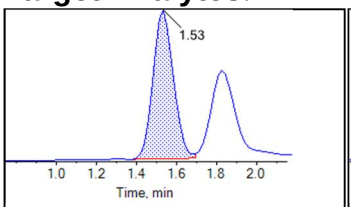
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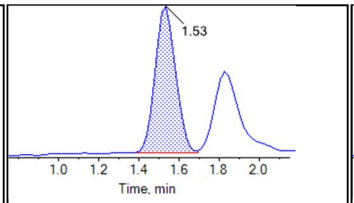
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Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:06:50	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

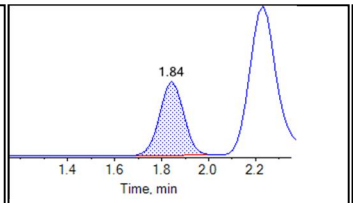
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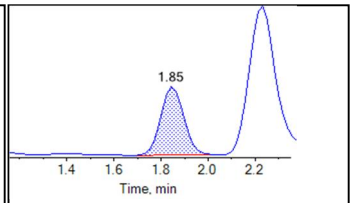
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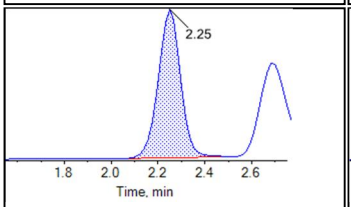
PFBS_2



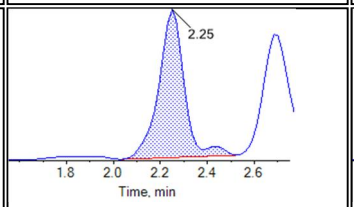
PFHxA_1



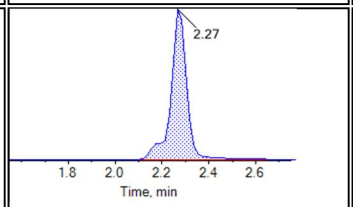
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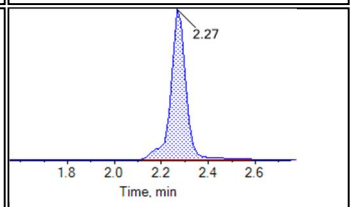
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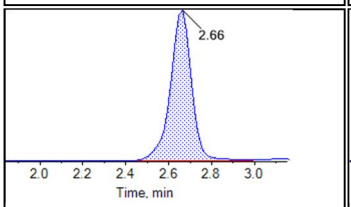
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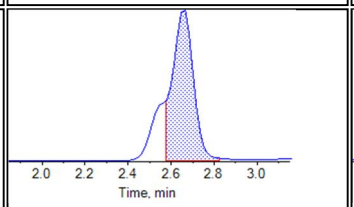
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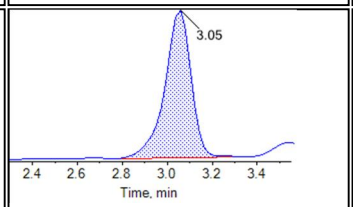
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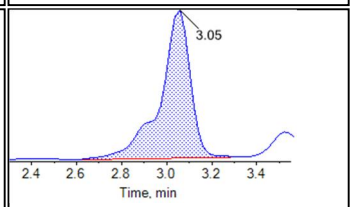
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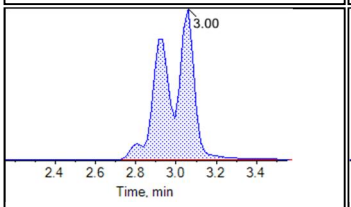
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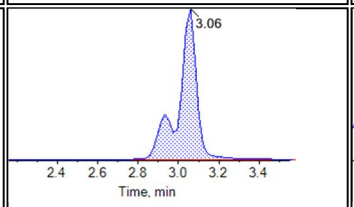
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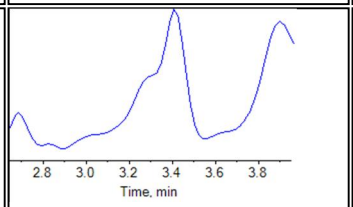
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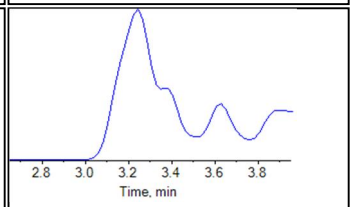
PFOS_1



PFOS_2



PFDA_1

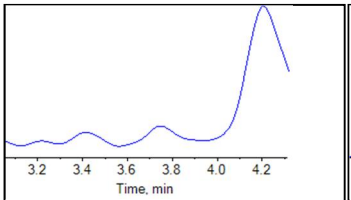


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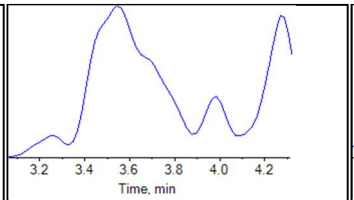
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Chromatogram Report

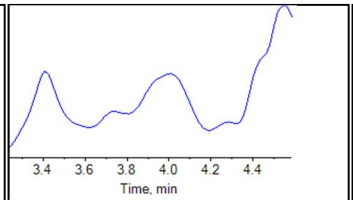
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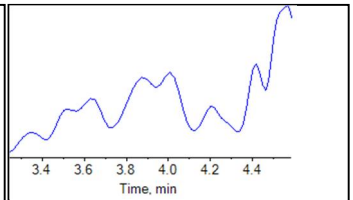
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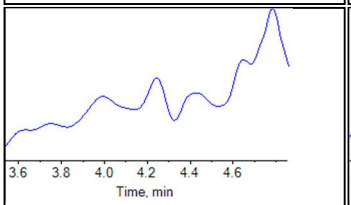
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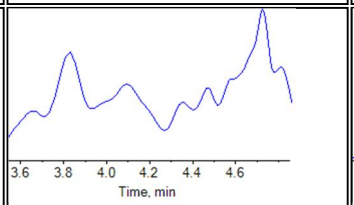
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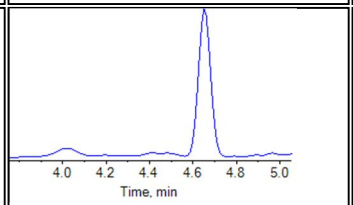
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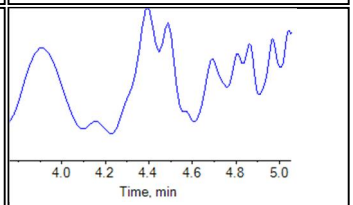
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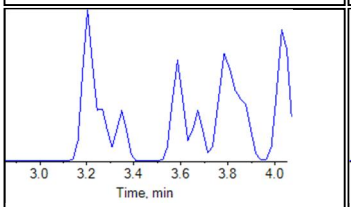
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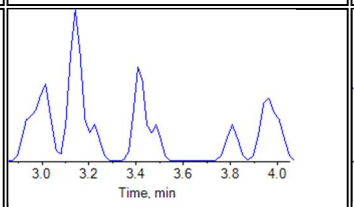
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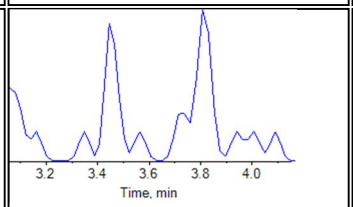
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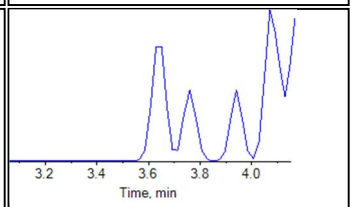
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NMeFOSAA_2

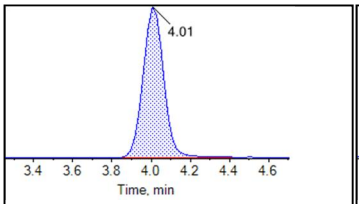


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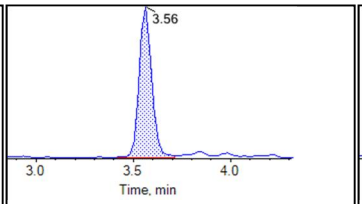


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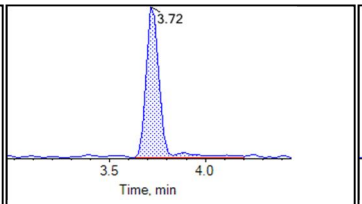
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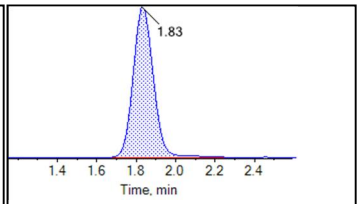
13C2-PFDoA



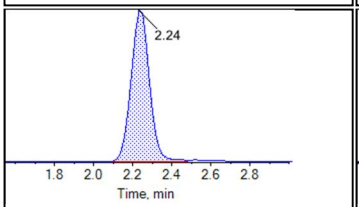
d3-MeFOSAA



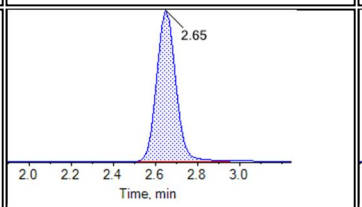
d5-EtFOSAA



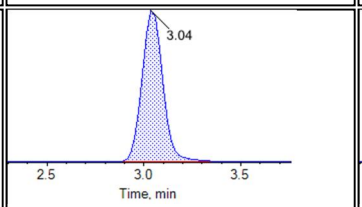
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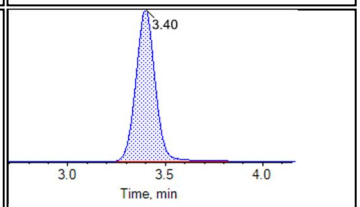
13C4-PFHpA



13C8-PFOA



13C9-PFNA

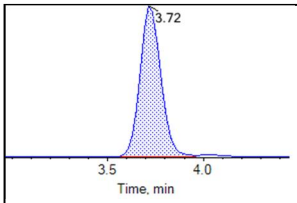


13C6-PFDA

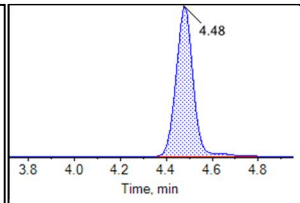
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Chromatogram Report

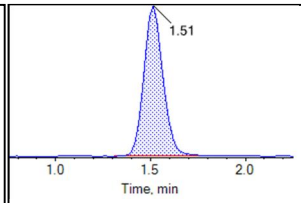
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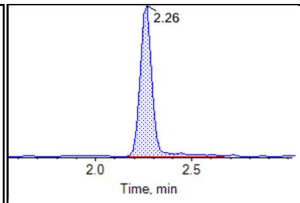
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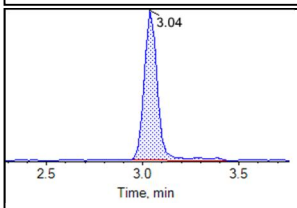
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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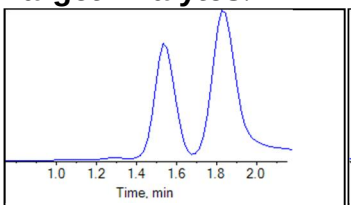
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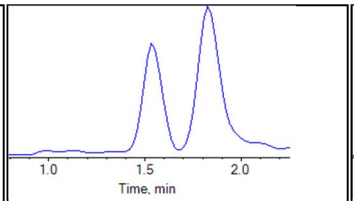
Sample Name	J8407-FS-D(5)	**Injection Vial**	52
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:17:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

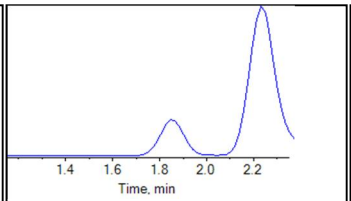
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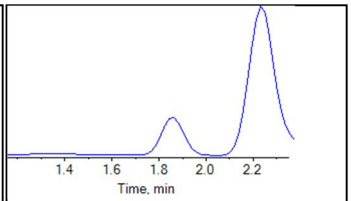
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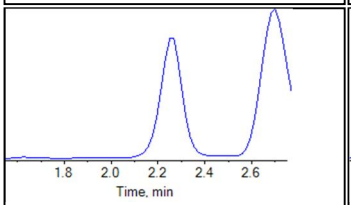
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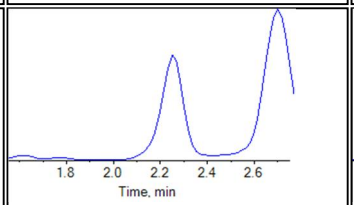
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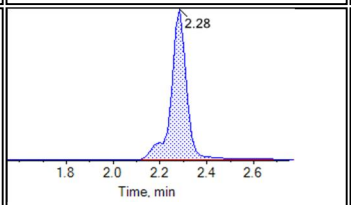
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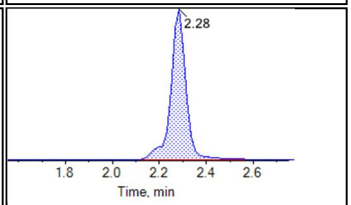
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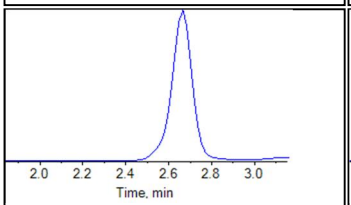
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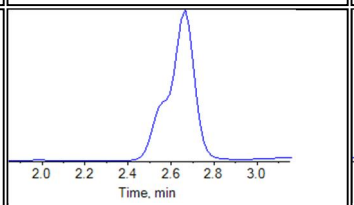
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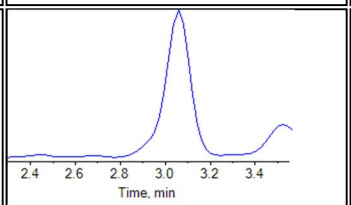
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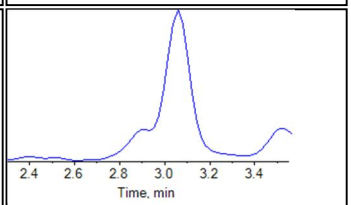
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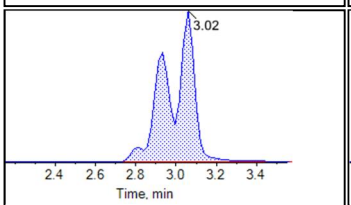
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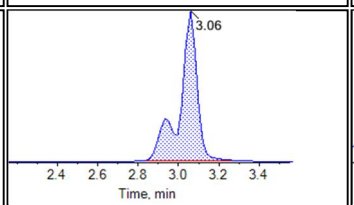
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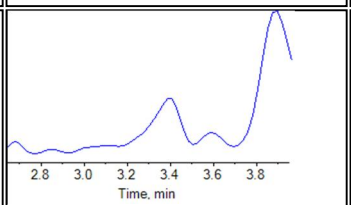
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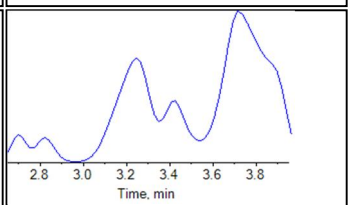
PFOS_1



PFOS_2



PFDA_1

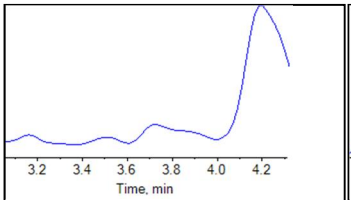


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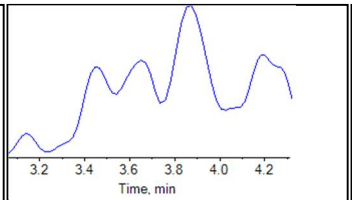
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Chromatogram Report

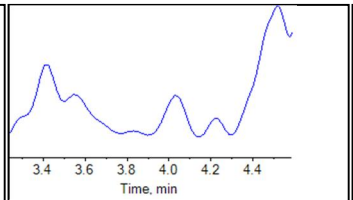
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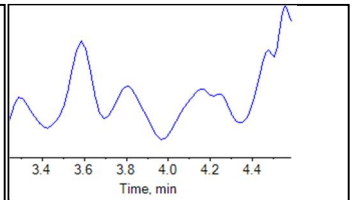
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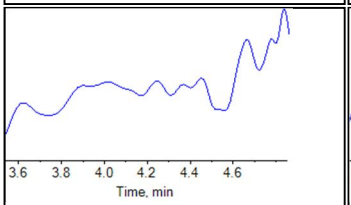
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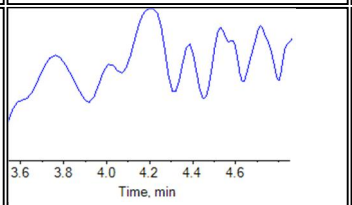
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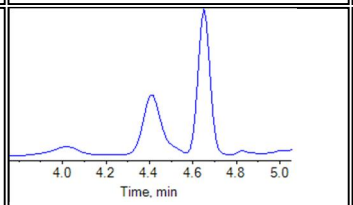
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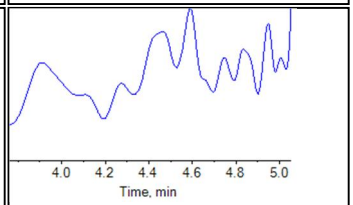
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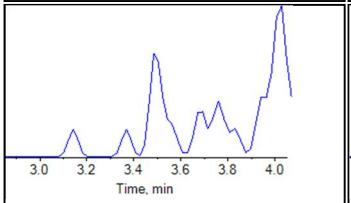
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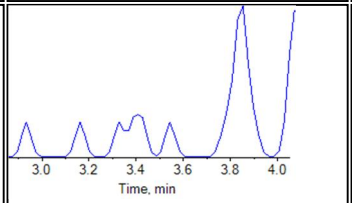
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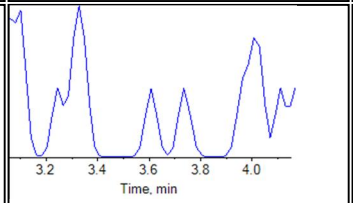
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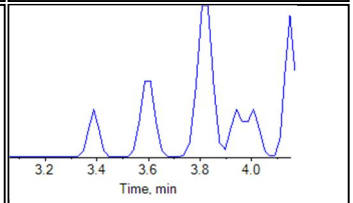
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NMeFOSAA_2

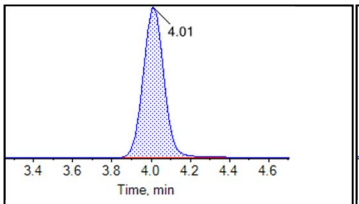


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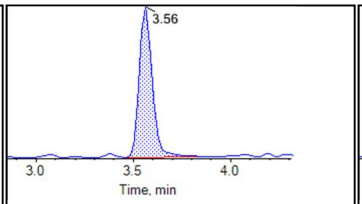


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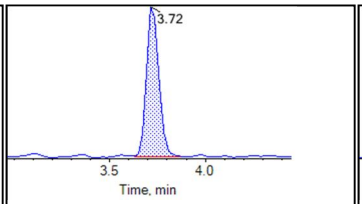
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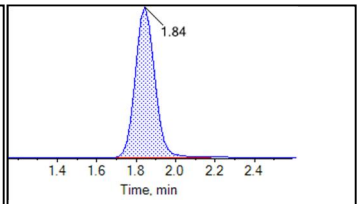
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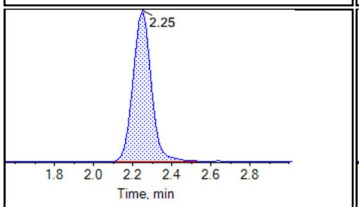
d3-MeFOSAA



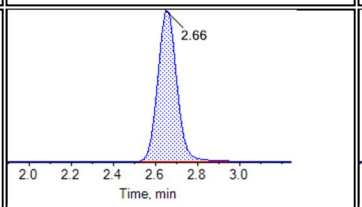
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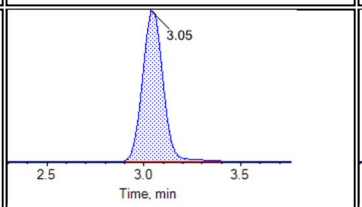
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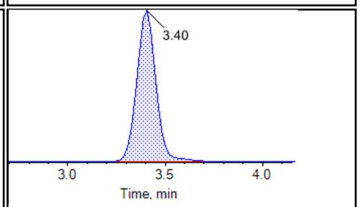
13C4-PFHpA



13C8-PFOA



13C9-PFNA

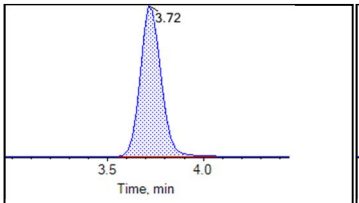


13C6-PFDA

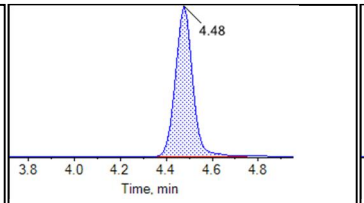
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Chromatogram Report

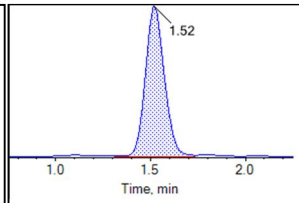
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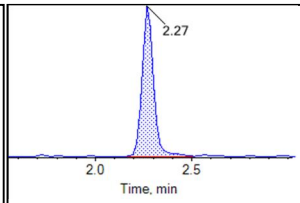
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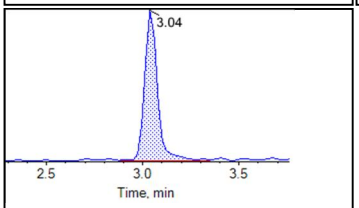
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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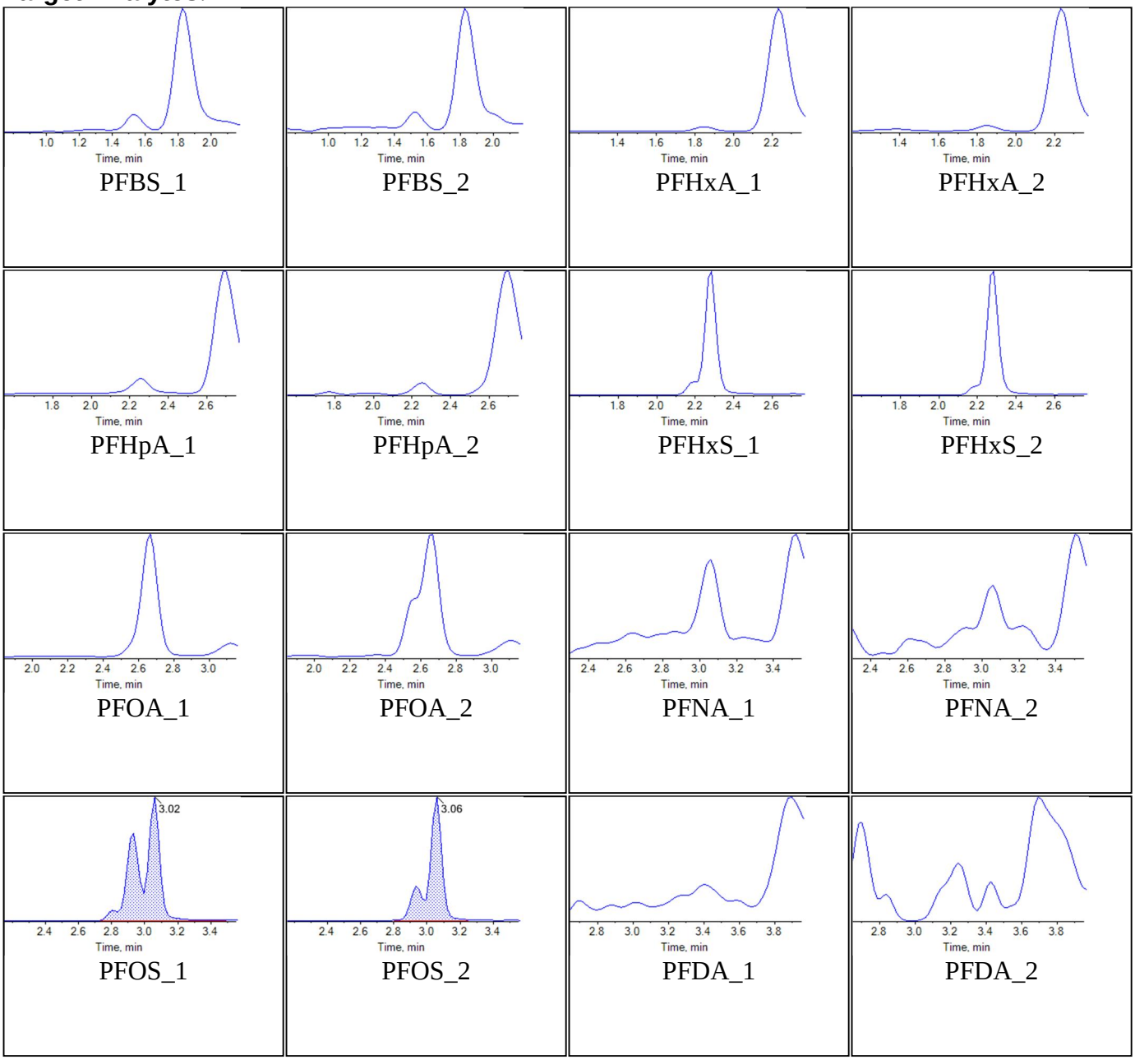
Chromatogram Report

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Sample Name	J8407-FS-D(7)	**Injection Vial**	53
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:28:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

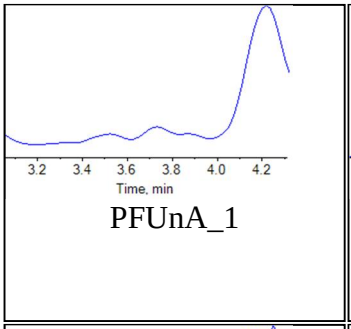
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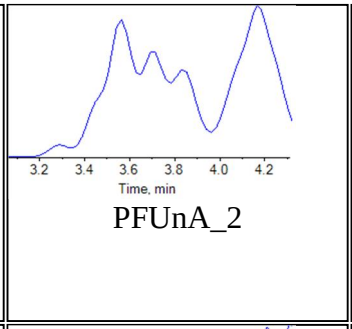
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Chromatogram Report

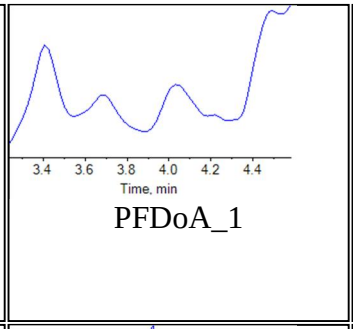
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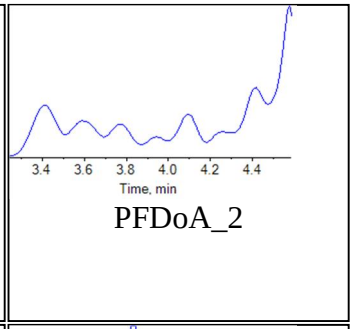
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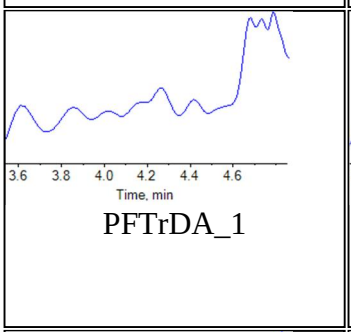
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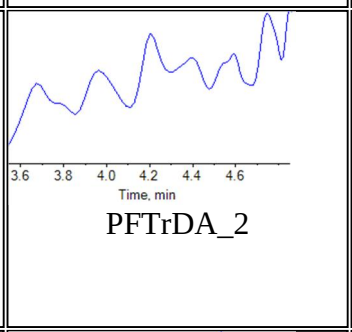
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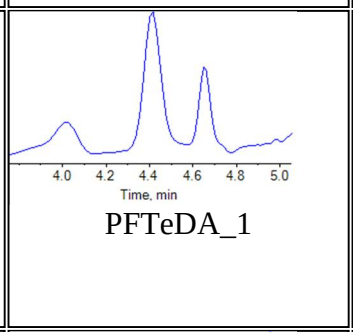
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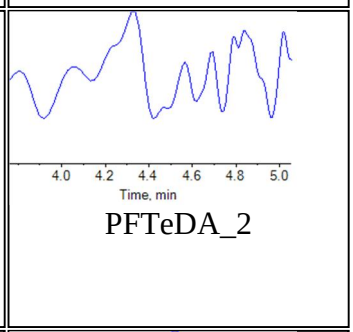
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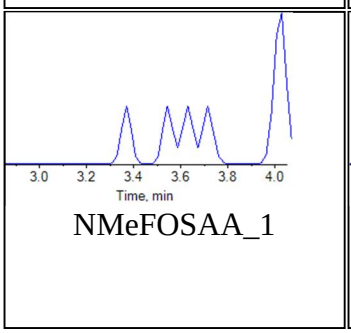
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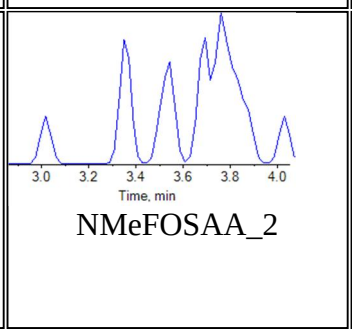
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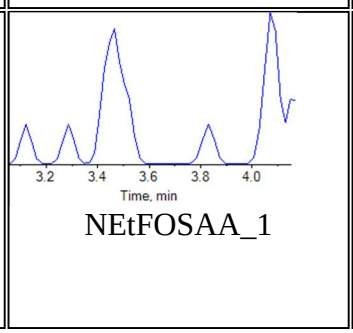
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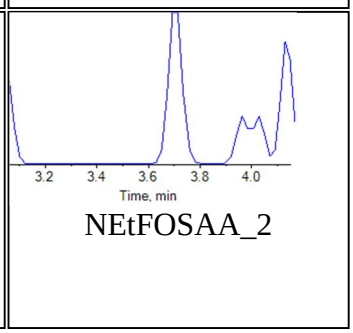
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NMeFOSAA_2

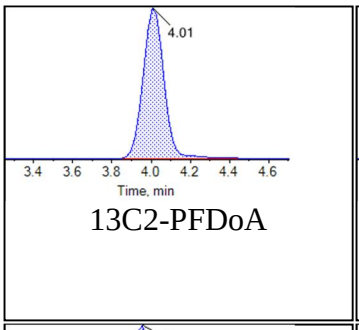


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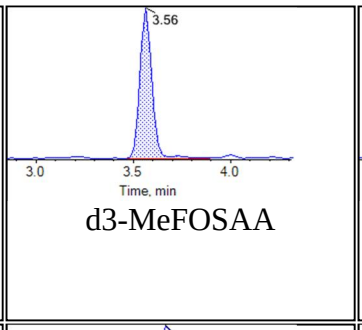


NEtFOSAA_2

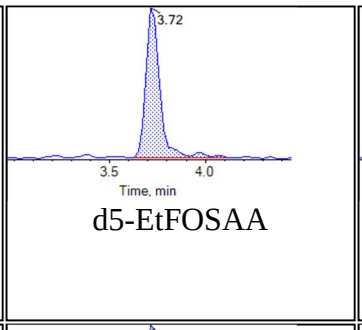
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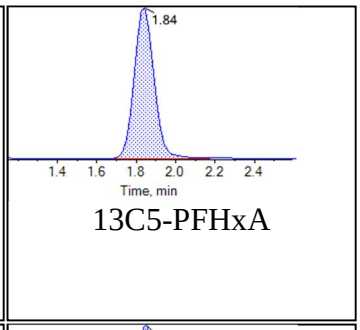
13C2-PFDoA



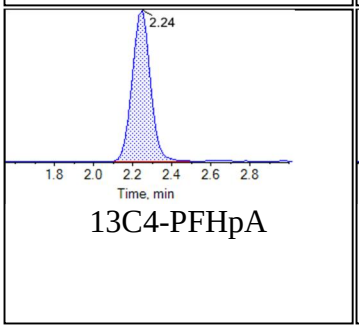
d3-MeFOSAA



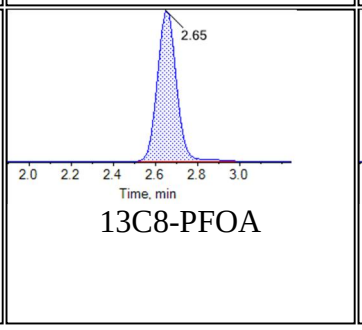
d5-EtFOSAA



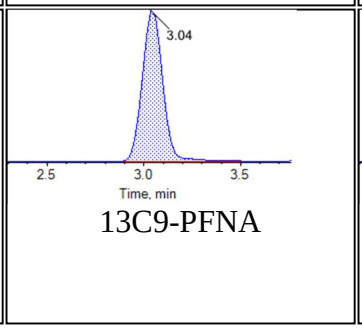
13C5-PFHxA



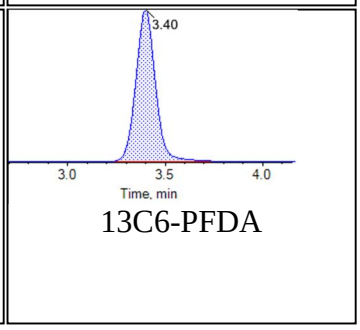
13C4-PFHpA



13C8-PFOA



13C9-PFNA

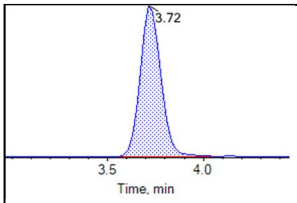


13C6-PFDA

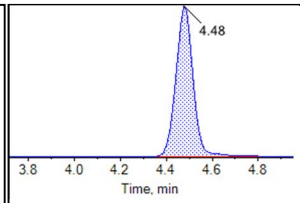
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Chromatogram Report

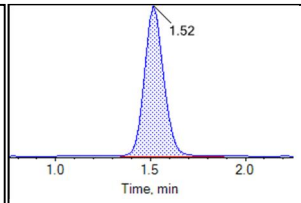
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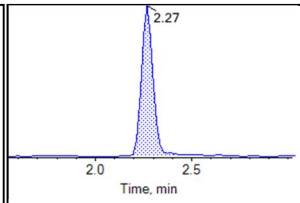
13C7-PFUnA



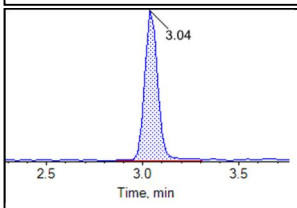
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

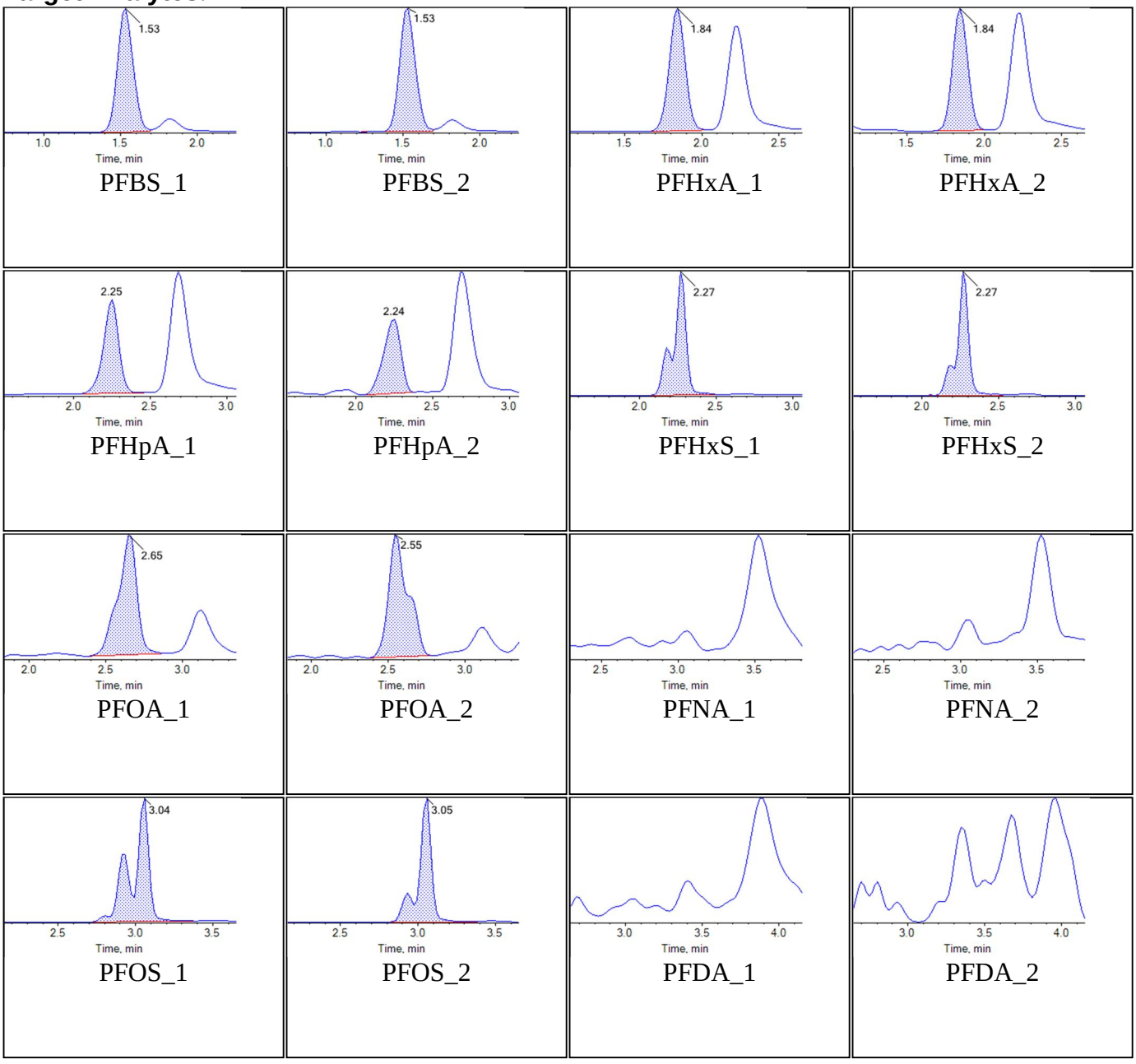
Chromatogram Report

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Printed: 17/10/2018 12:23:13 PM

Sample Name	J8408-FS(3)	**Injection Vial**	54
Sample ID	VC-AOC16-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:39:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

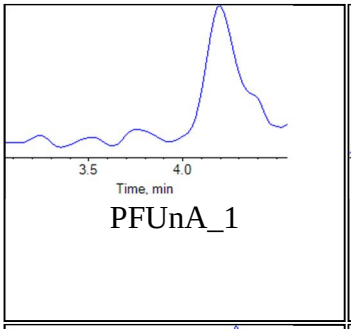
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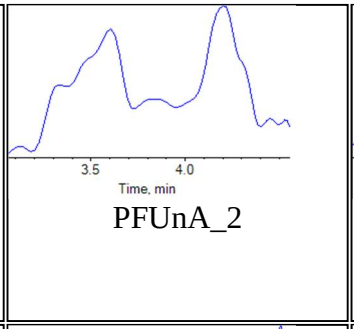
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Chromatogram Report

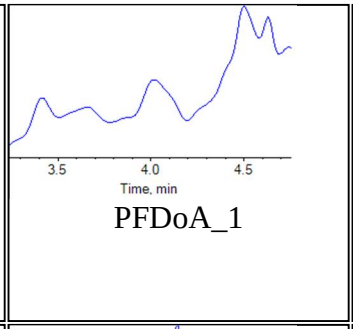
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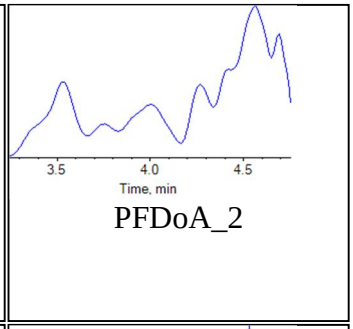
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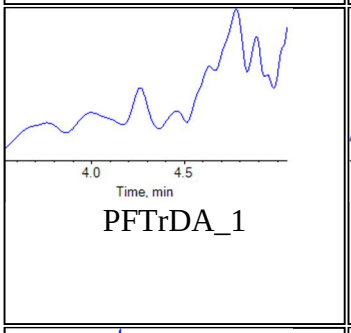
PFUnA_2



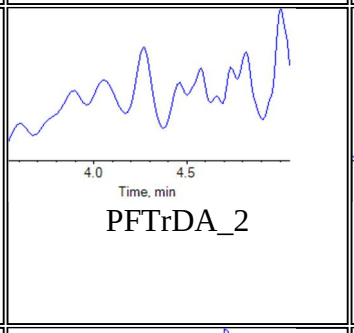
PFDoA_1



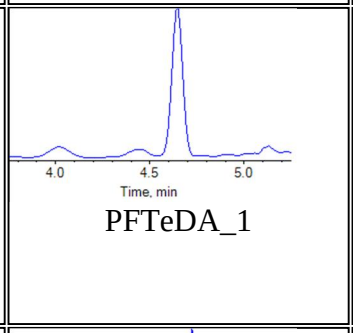
PFDoA_2



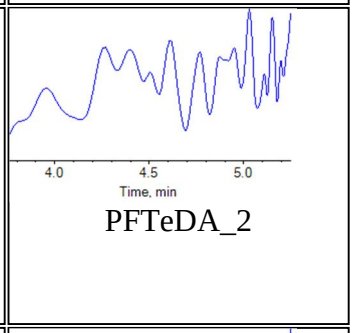
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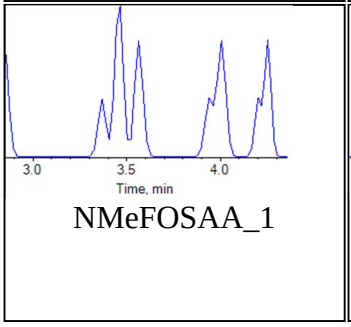
PFTrDA_2



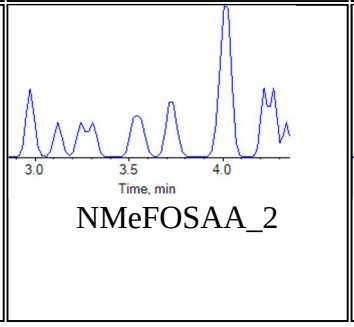
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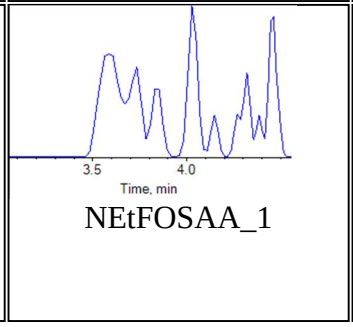
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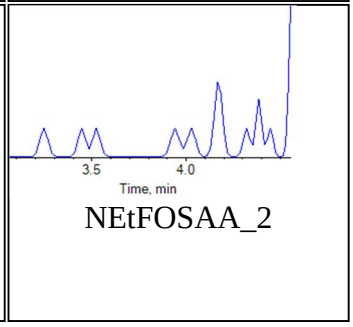
NMeFOSAA_1



NMeFOSAA_2

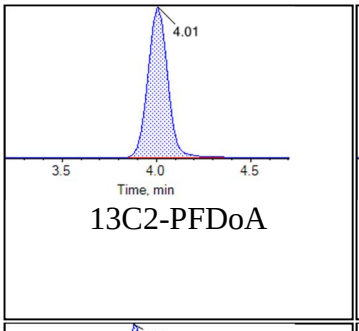


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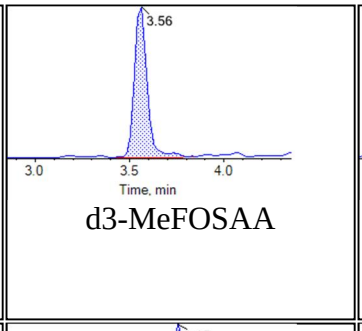


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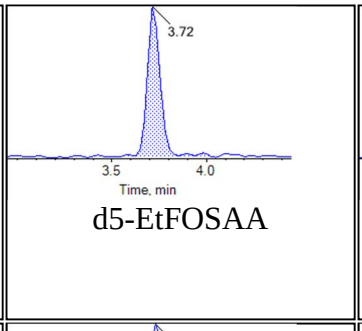
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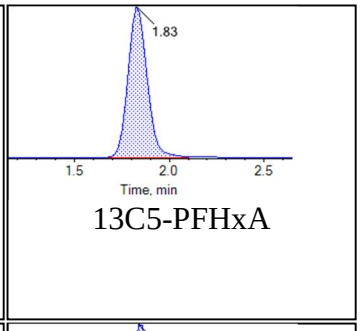
13C2-PFDoA



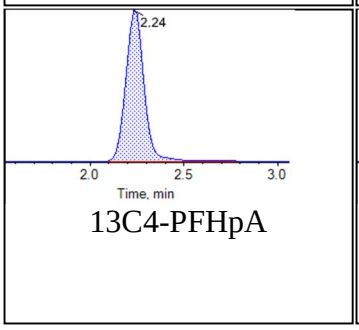
d3-MeFOSAA



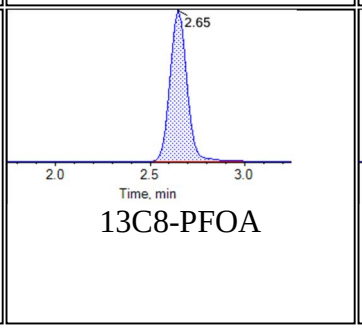
d5-EtFOSAA



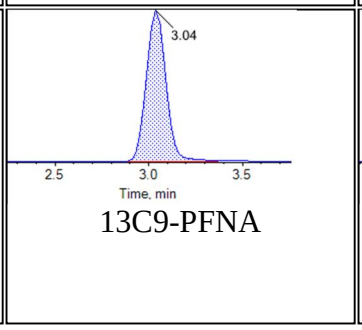
13C5-PFHxA



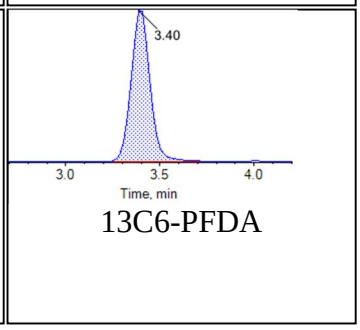
13C4-PFHpA



13C8-PFOA



13C9-PFNA

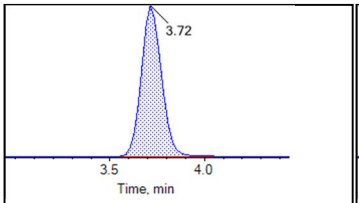


13C6-PFDA

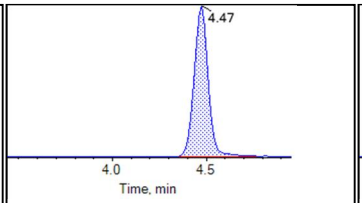
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Chromatogram Report

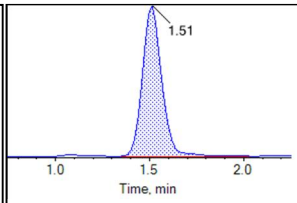
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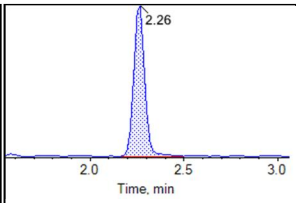
13C7-PFUnA



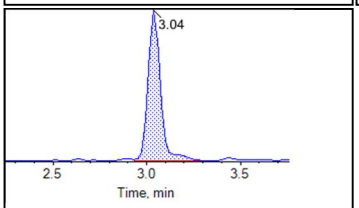
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

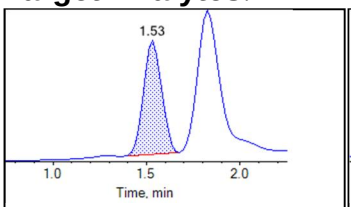
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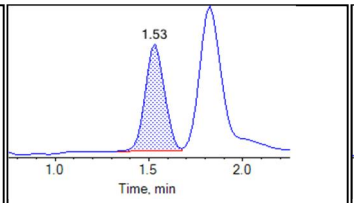
Sample Name	J8409-FS(3)	**Injection Vial**	1
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:50:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

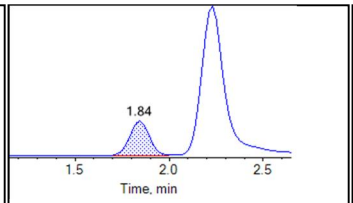
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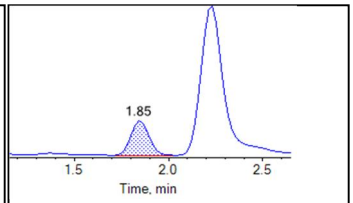
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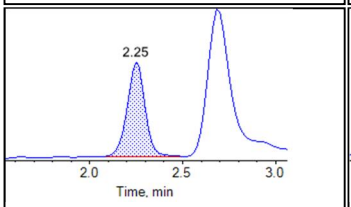
PFBS_2



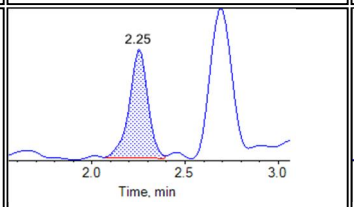
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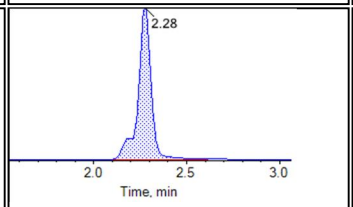
PFHxA_2



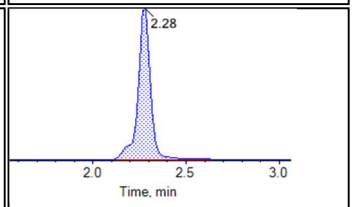
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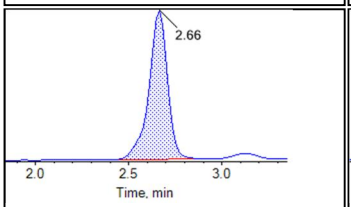
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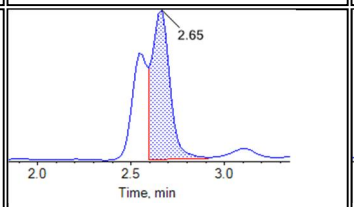
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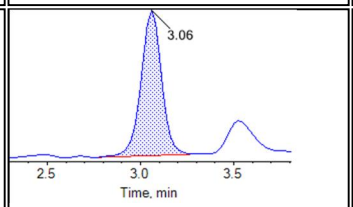
PFHxS_2



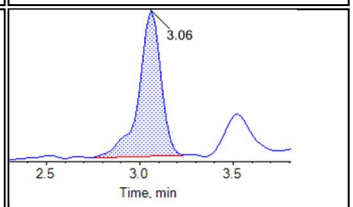
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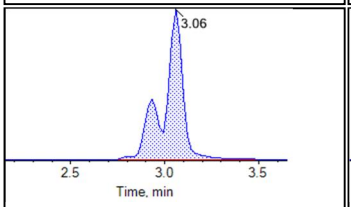
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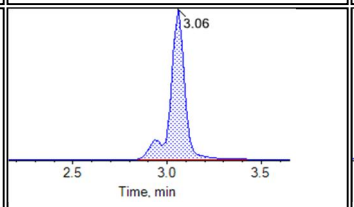
PFNA_1



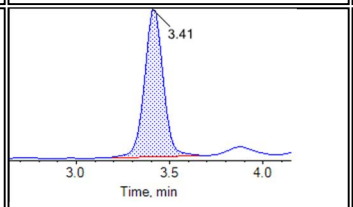
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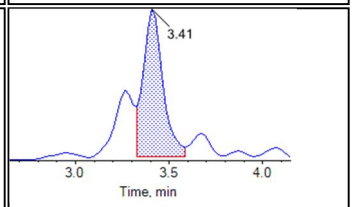
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PFOS_2



PFDA_1

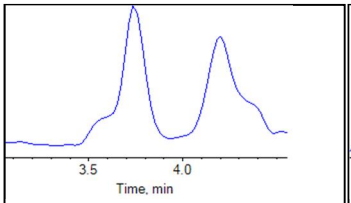


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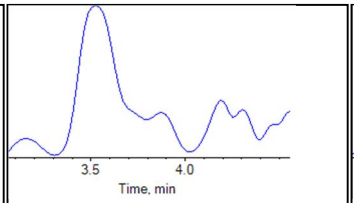
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Chromatogram Report

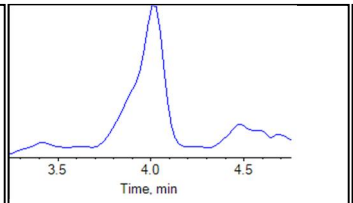
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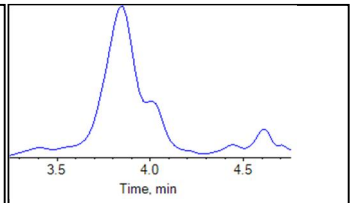
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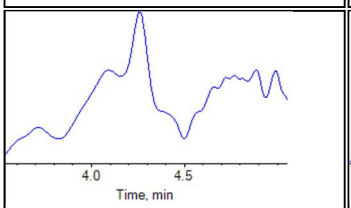
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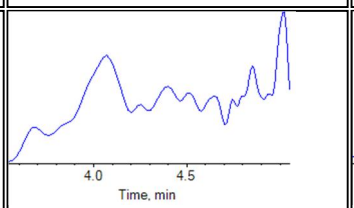
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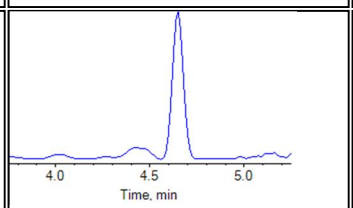
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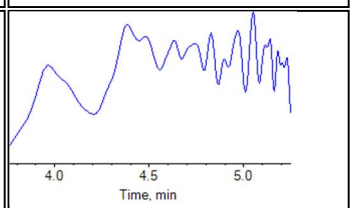
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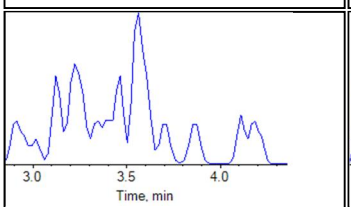
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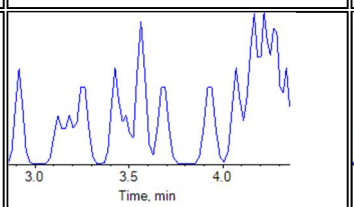
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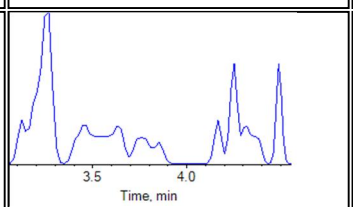
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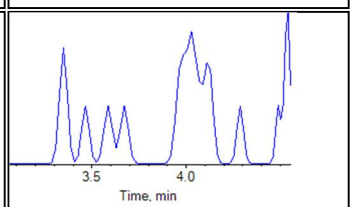
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NMeFOSAA_2

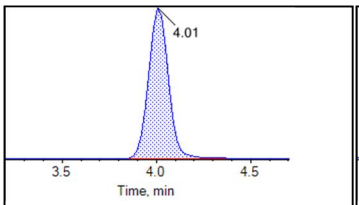


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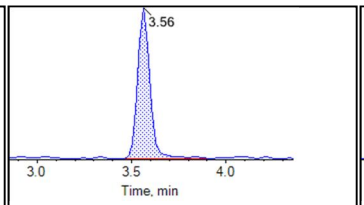


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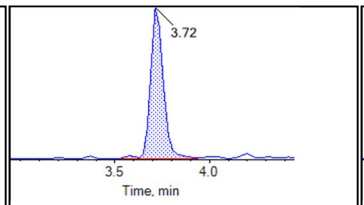
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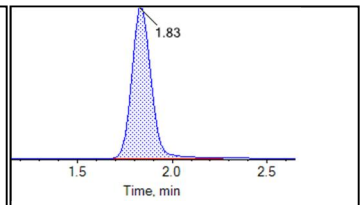
13C2-PFDoA



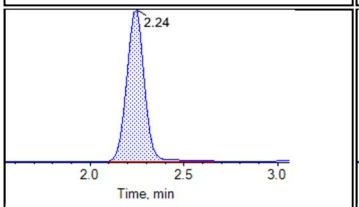
d3-MeFOSAA



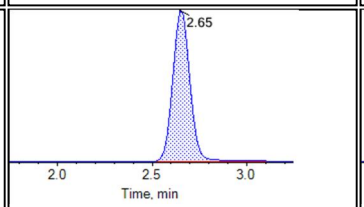
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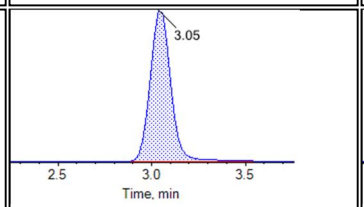
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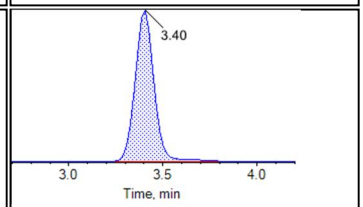
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13C8-PFOA



13C9-PFNA

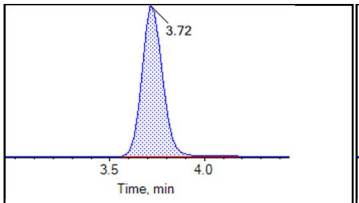


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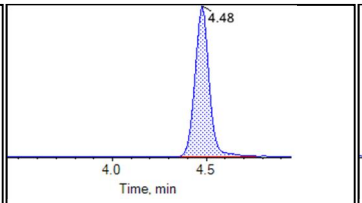
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Chromatogram Report

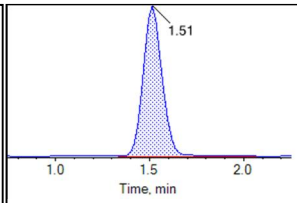
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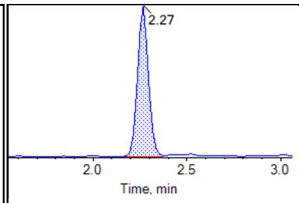
13C7-PFUnA



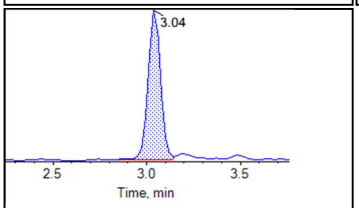
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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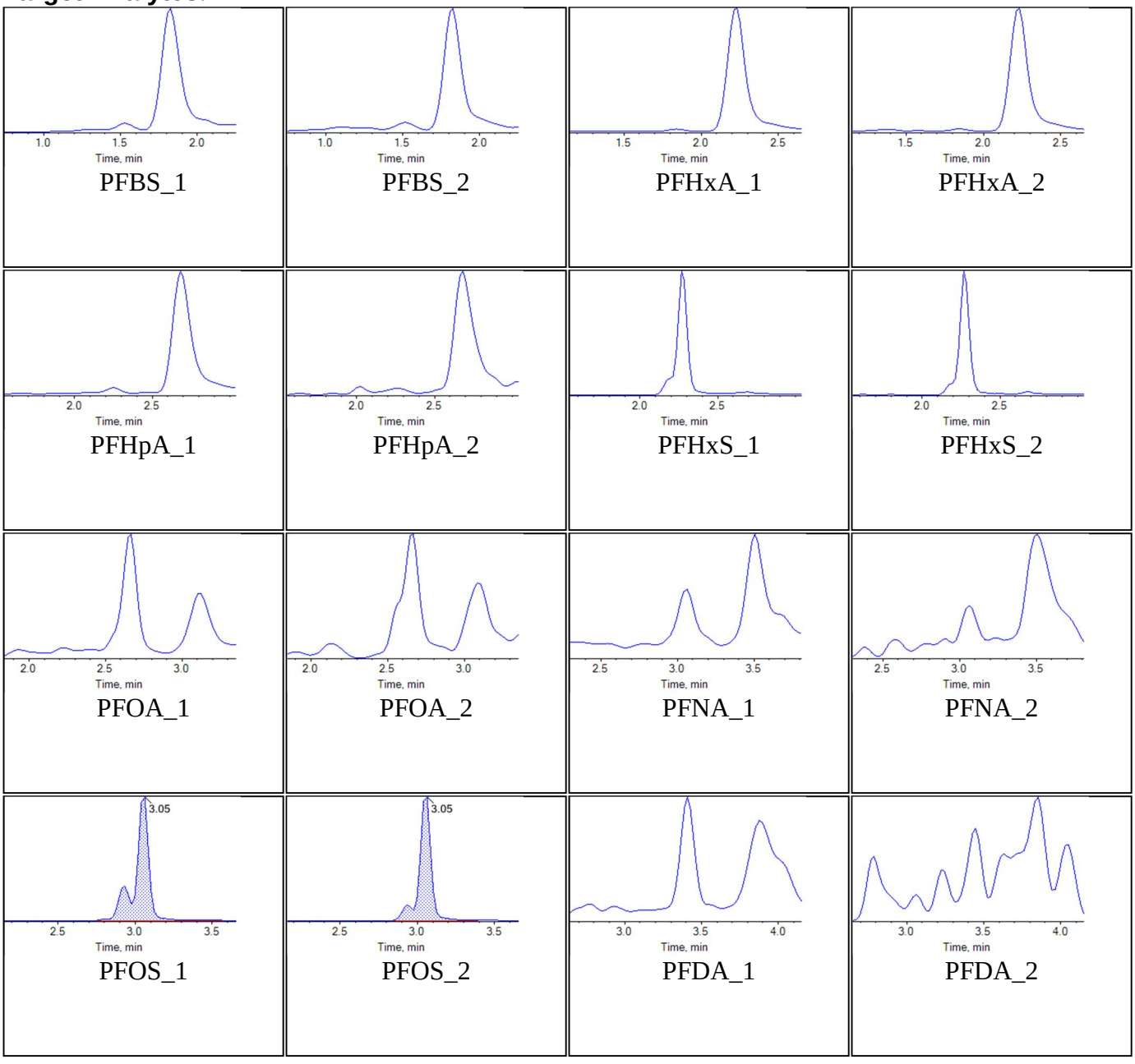
Chromatogram Report

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Sample Name	J8409-FS-D(5)	**Injection Vial**	2
Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:01:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

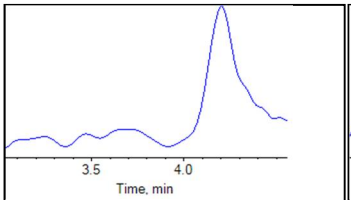
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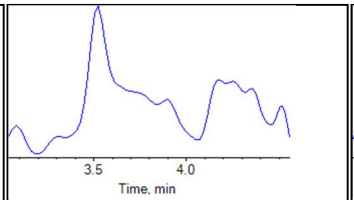
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Chromatogram Report

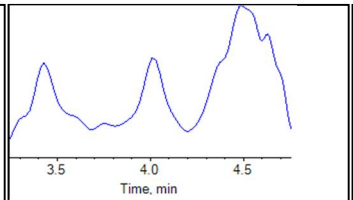
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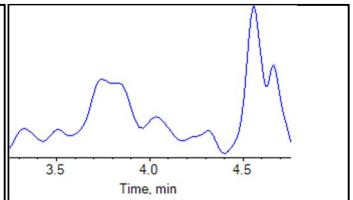
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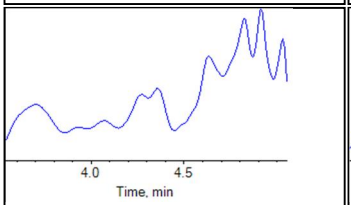
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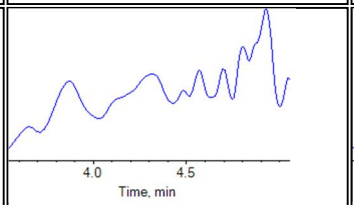
PFDoA_1



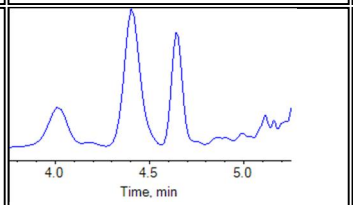
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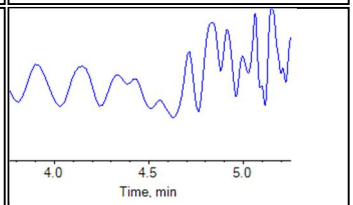
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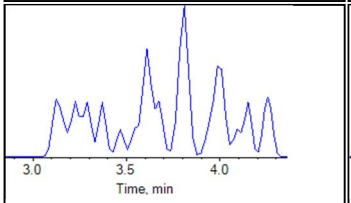
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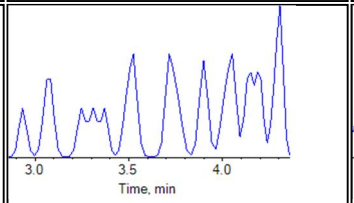
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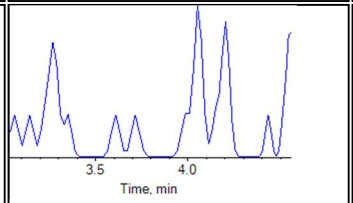
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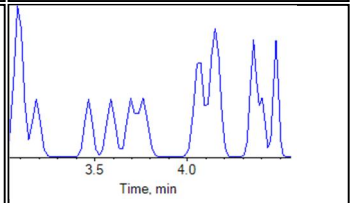
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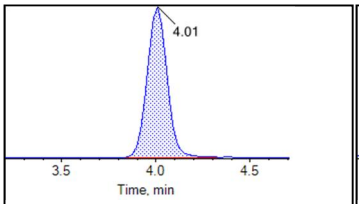


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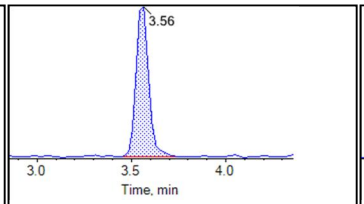


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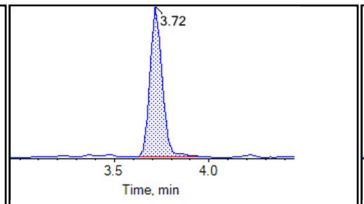
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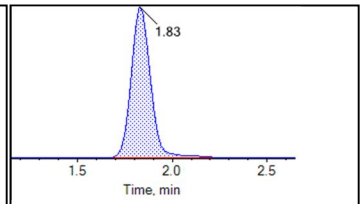
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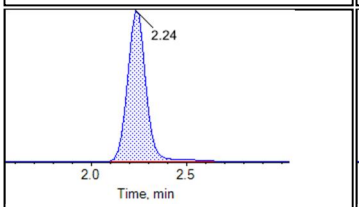
d3-MeFOSAA



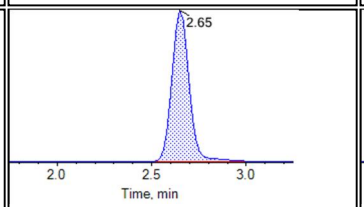
d5-EtFOSAA



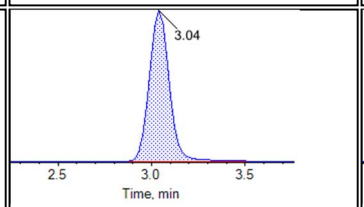
13C5-PFHxA



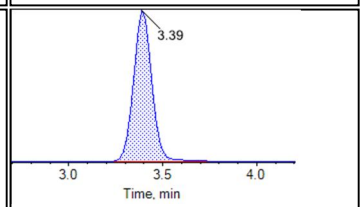
13C4-PFHpA



13C8-PFOA



13C9-PFNA

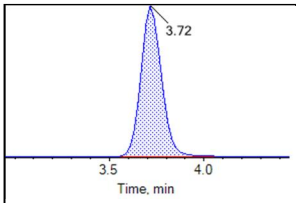


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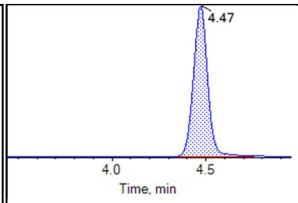
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Chromatogram Report

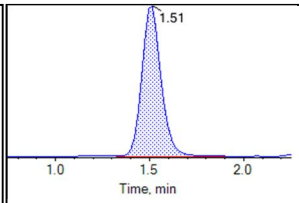
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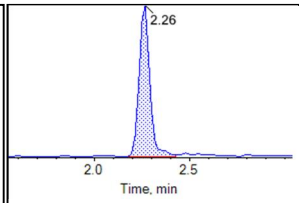
13C7-PFUnA



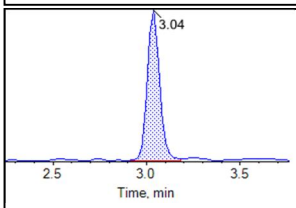
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

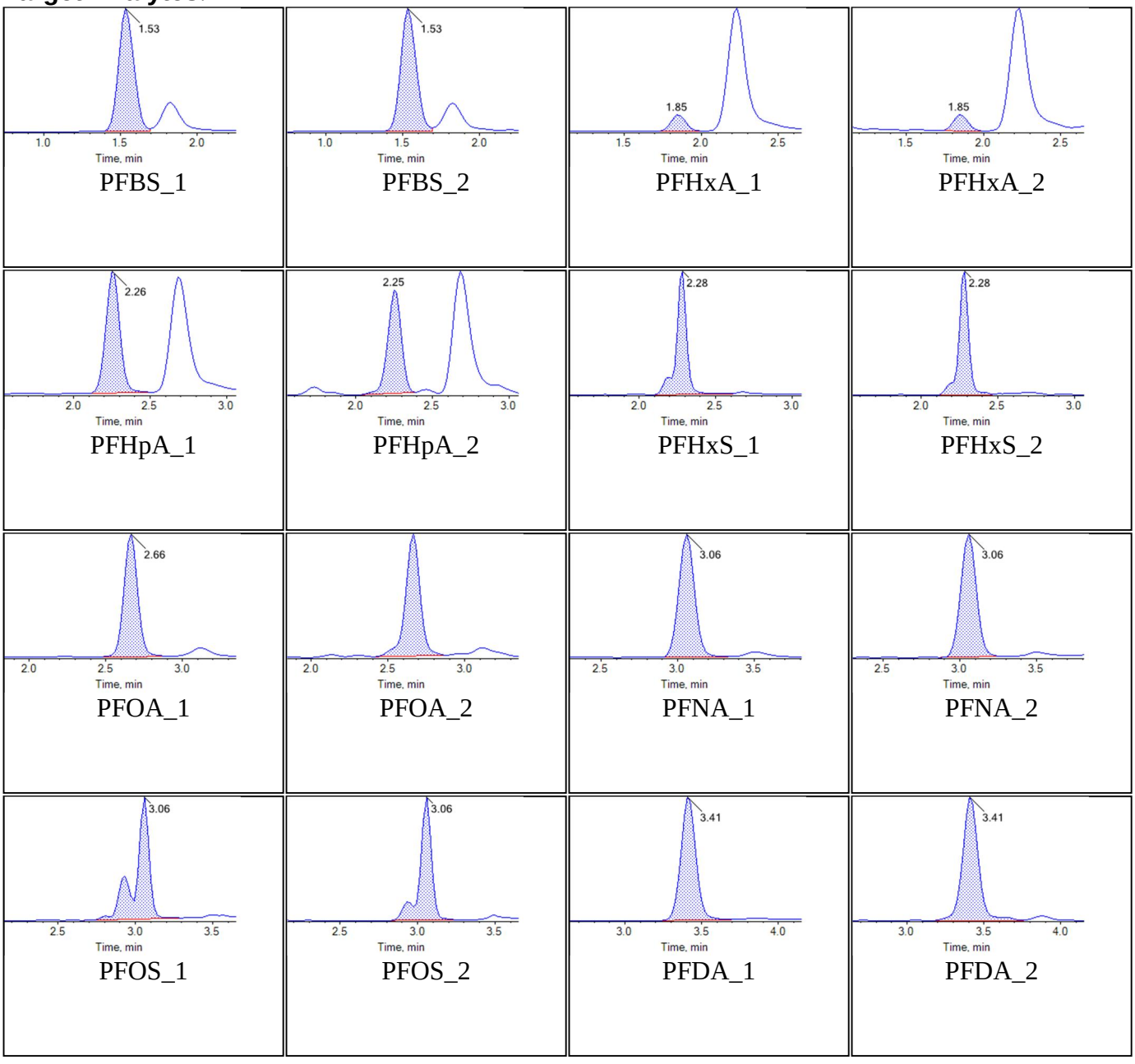
Chromatogram Report

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Sample Name	KB76 CCV	**Injection Vial**	3
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

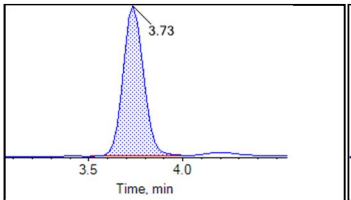
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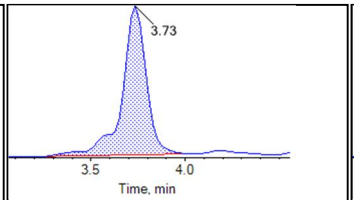
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Chromatogram Report

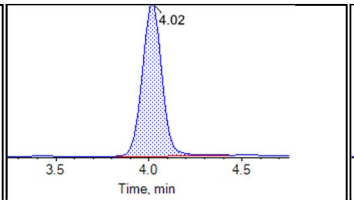
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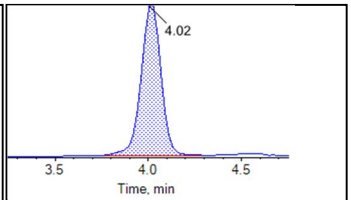
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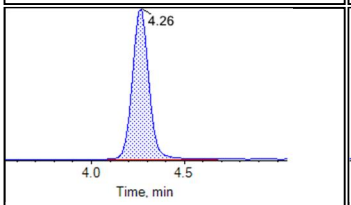
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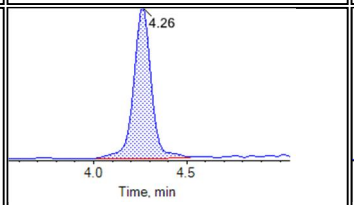
PFDoA_1



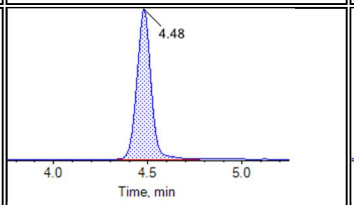
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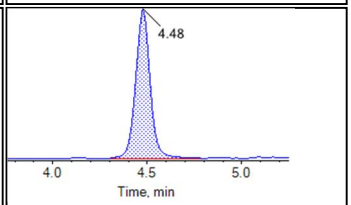
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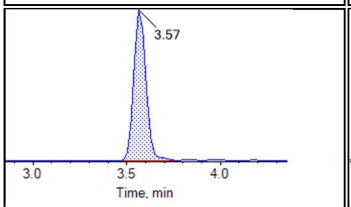
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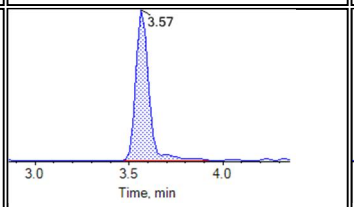
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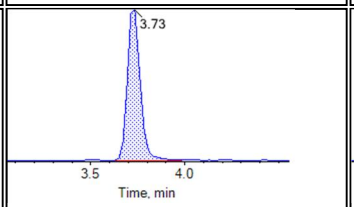
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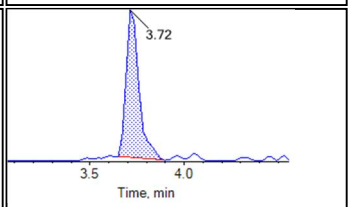
NMeFOSAA_1



NMeFOSAA_2

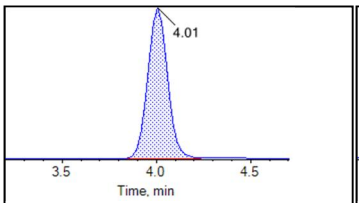


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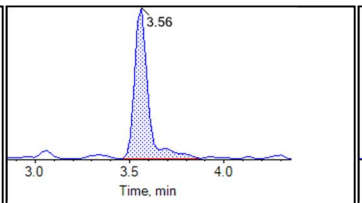


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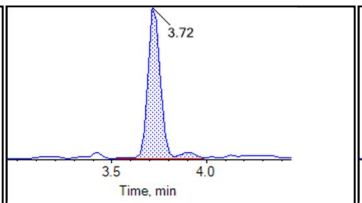
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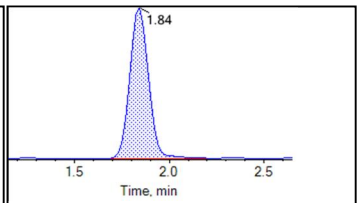
13C2-PFDoA



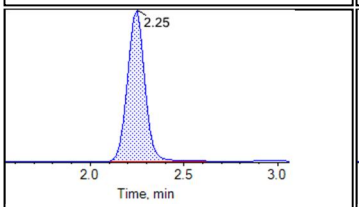
d3-MeFOSAA



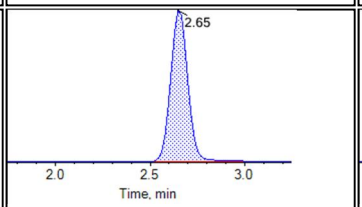
d5-EtFOSAA



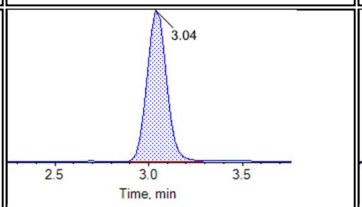
13C5-PFHxA



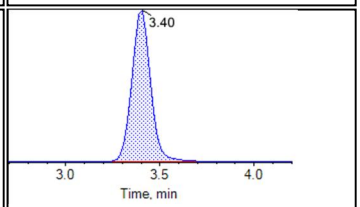
13C4-PFHpA



13C8-PFOA



13C9-PFNA

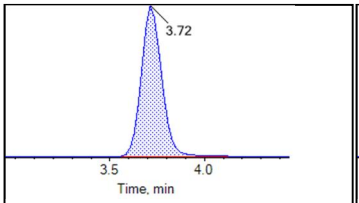


13C6-PFDA

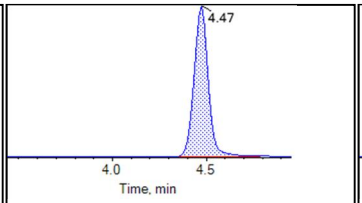
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Chromatogram Report

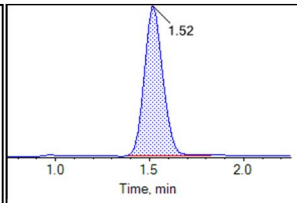
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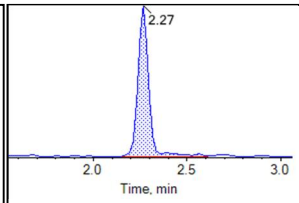
13C7-PFUnA



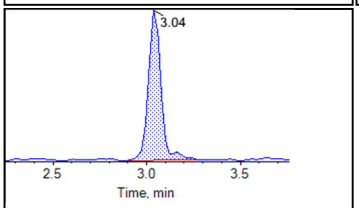
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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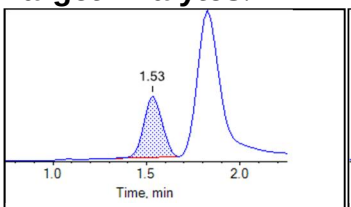
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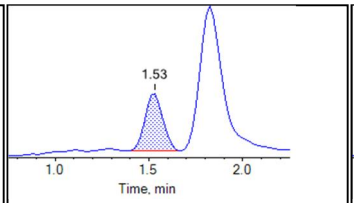
Sample Name	J8410-FS(3)	**Injection Vial**	5
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:33:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

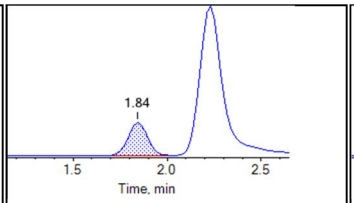
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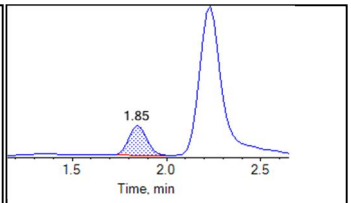
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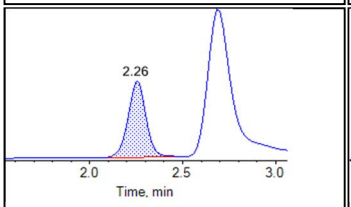
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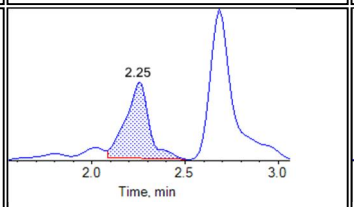
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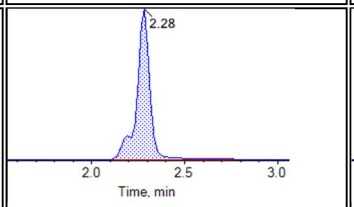
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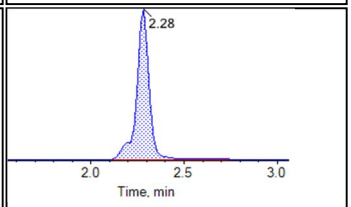
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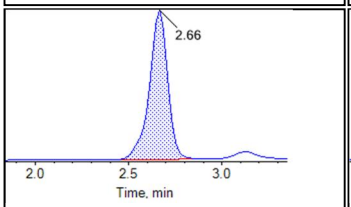
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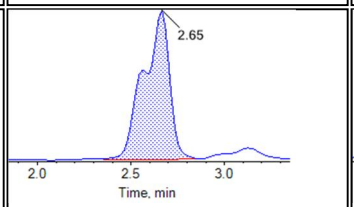
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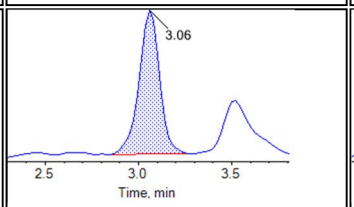
PFHxS_2



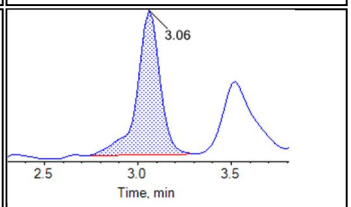
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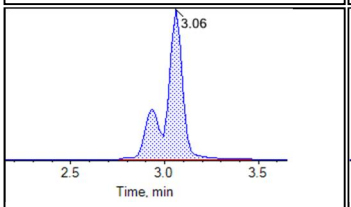
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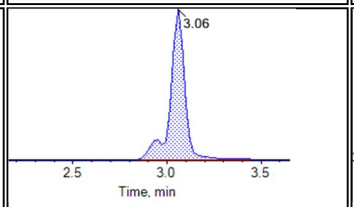
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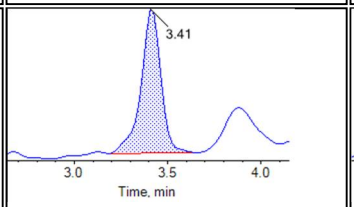
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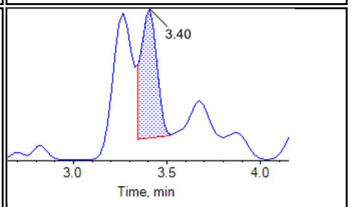
PFOS_1



PFOS_2



PFDA_1

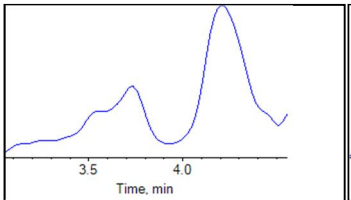


PFDA_2

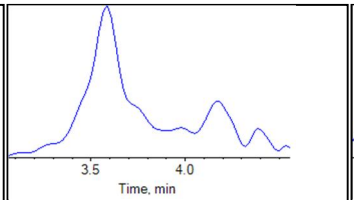
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Chromatogram Report

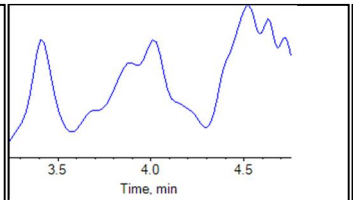
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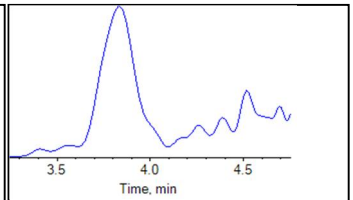
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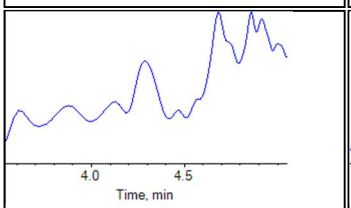
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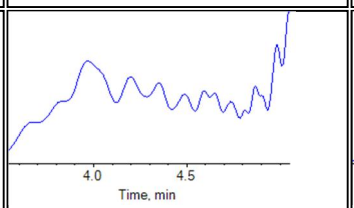
PFDoA_1



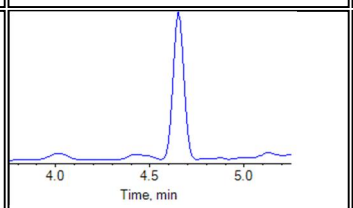
PFDoA_2



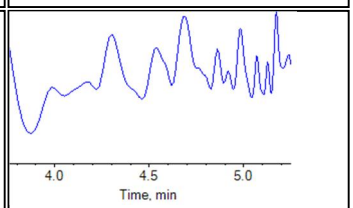
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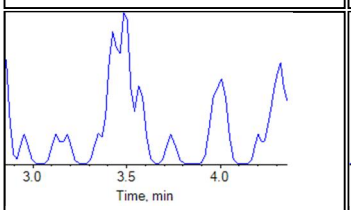
PFTrDA_2



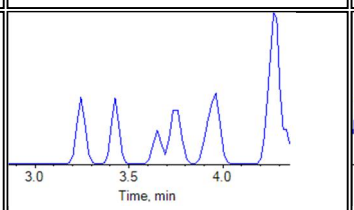
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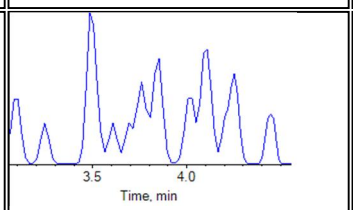
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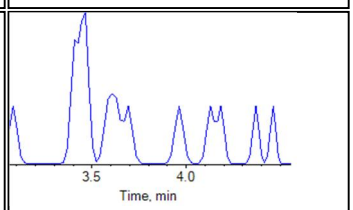
NMeFOSAA_1



NMeFOSAA_2

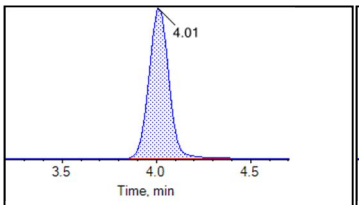


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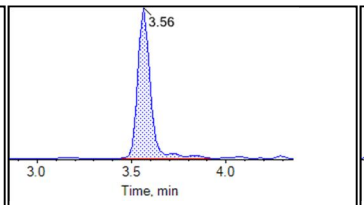


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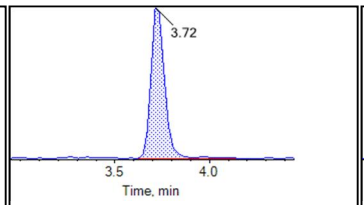
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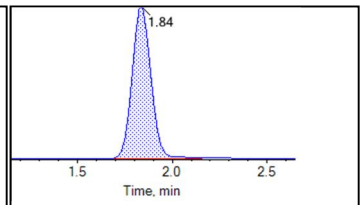
13C2-PFDoA



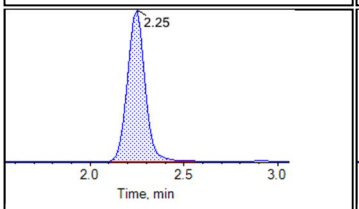
d3-MeFOSAA



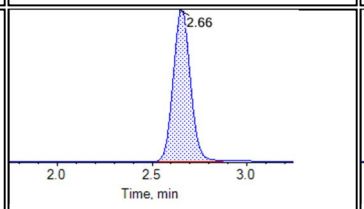
d5-EtFOSAA



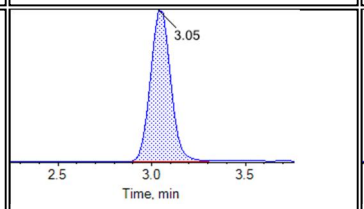
13C5-PFHxA



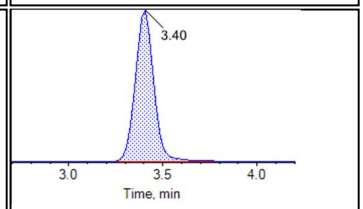
13C4-PFHpA



13C8-PFOA



13C9-PFNA

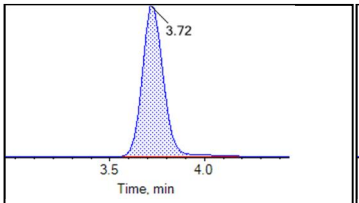


13C6-PFDA

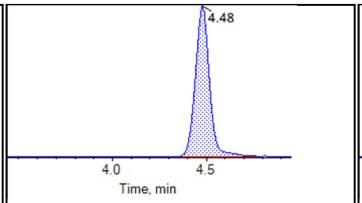
BATTELLE

Chromatogram Report

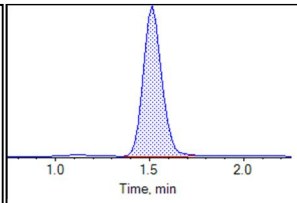
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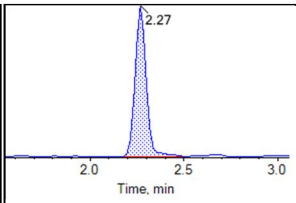
13C7-PFUnA



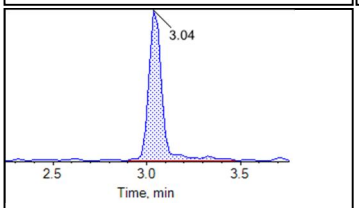
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

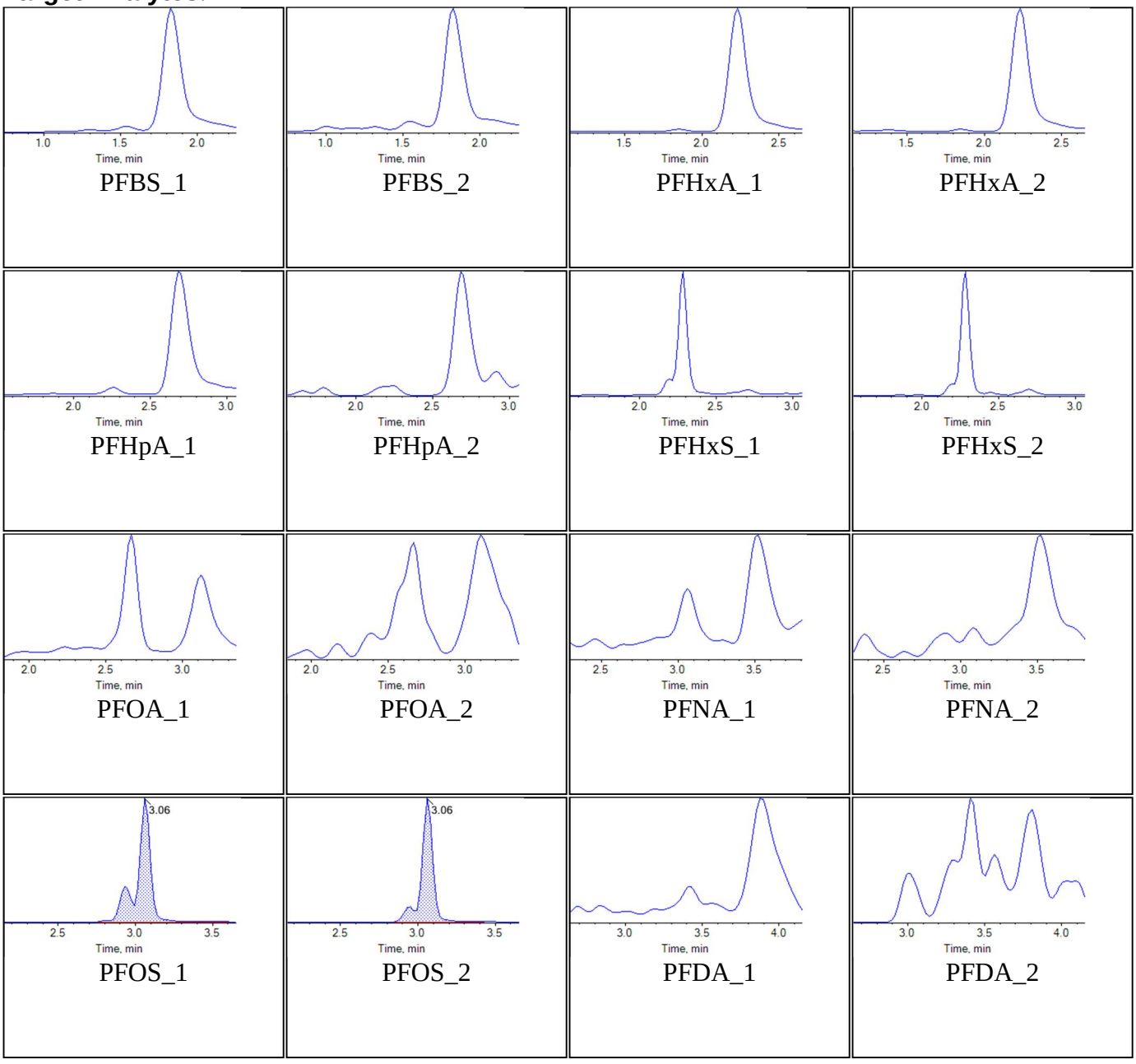
Chromatogram Report

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Printed: 17/10/2018 12:23:54 PM

Sample Name	J8410-FS-D(5)	**Injection Vial**	6
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:44:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

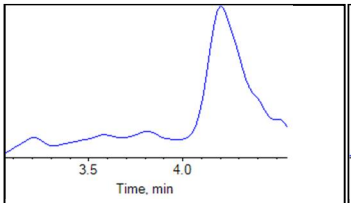
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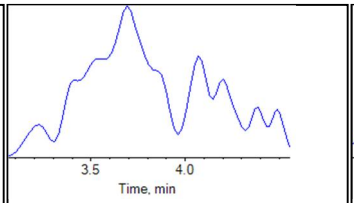
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Chromatogram Report

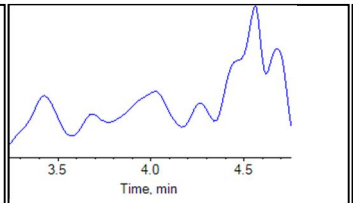
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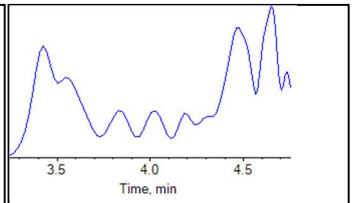
PFUnA_1



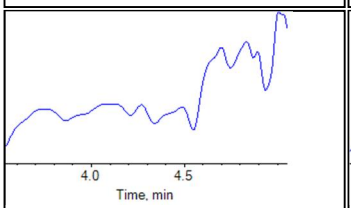
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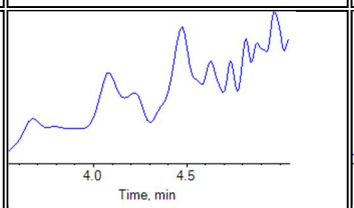
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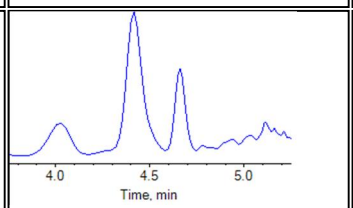
PFDoA_2



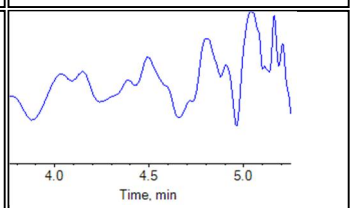
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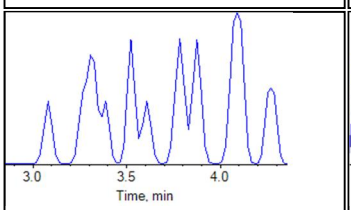
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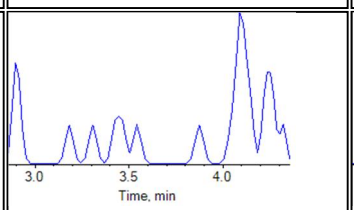
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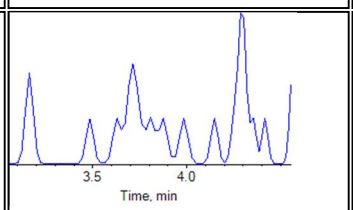
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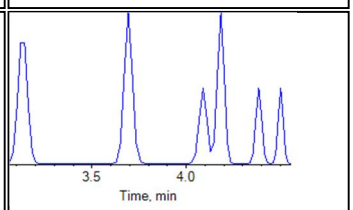
NMeFOSAA_1



NMeFOSAA_2

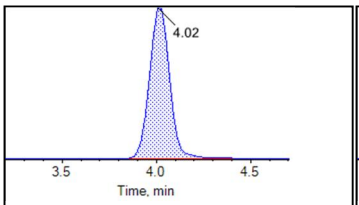


NEtFOSAA_1

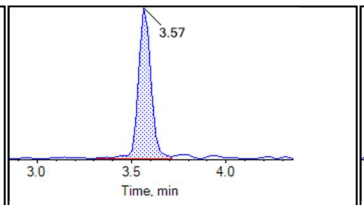


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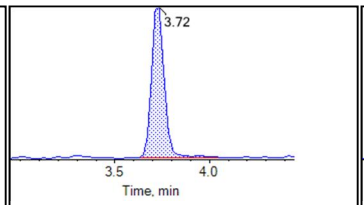
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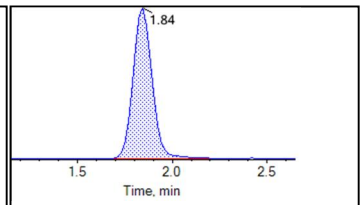
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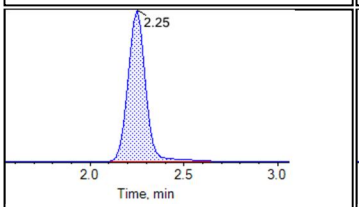
d3-MeFOSAA



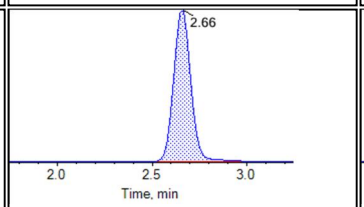
d5-EtFOSAA



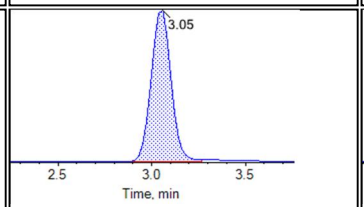
13C5-PFHxA



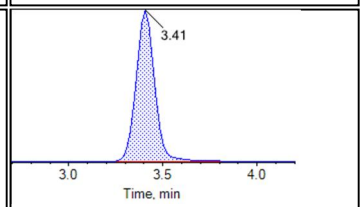
13C4-PFHpA



13C8-PFOA



13C9-PFNA

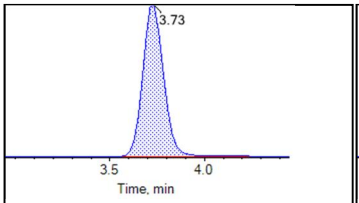


13C6-PFDA

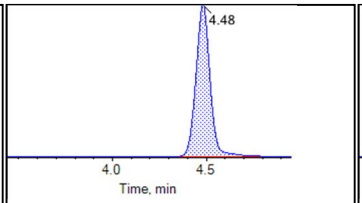
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Chromatogram Report

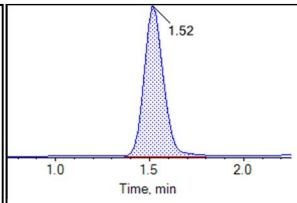
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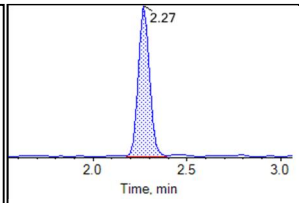
13C7-PFUnA



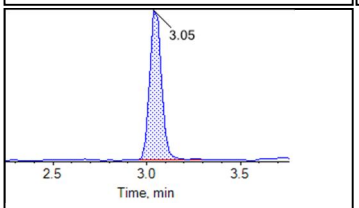
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

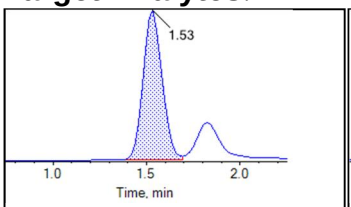
Chromatogram Report

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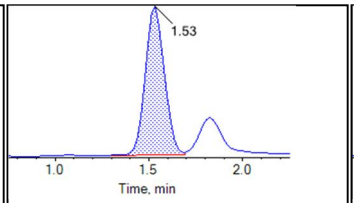
Sample Name	J8411-FS(3)	**Injection Vial**	7
Sample ID	VC-AOC16-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:55:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

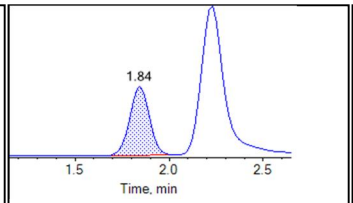
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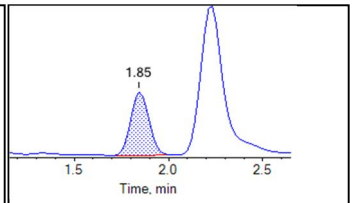
PFBS_1



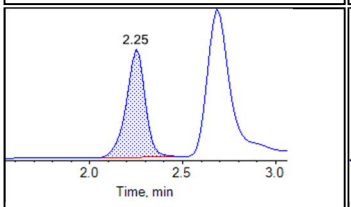
PFBS_2



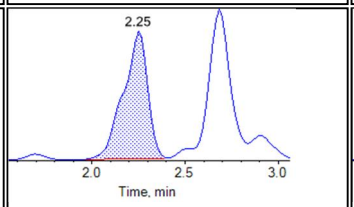
PFHxA_1



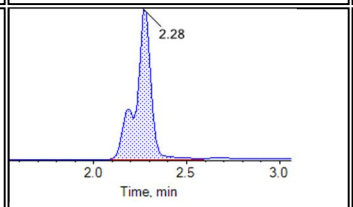
PFHxA_2



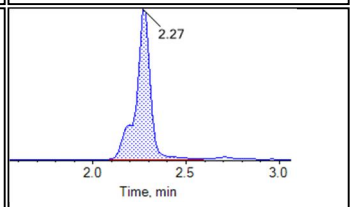
PFHpA_1



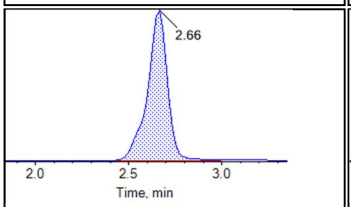
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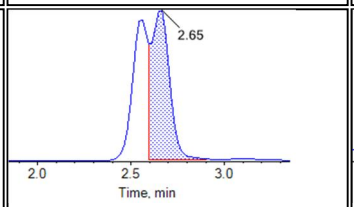
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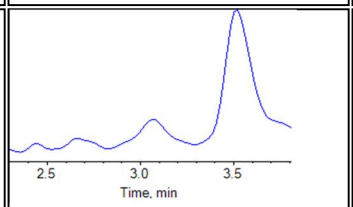
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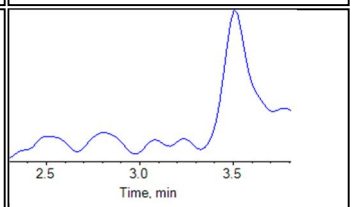
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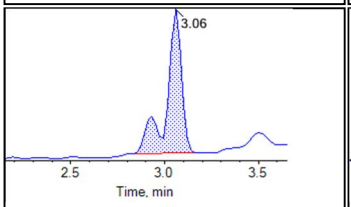
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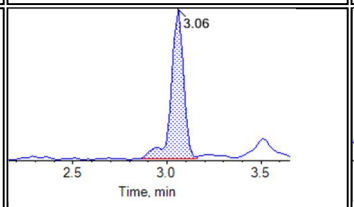
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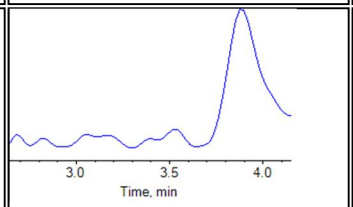
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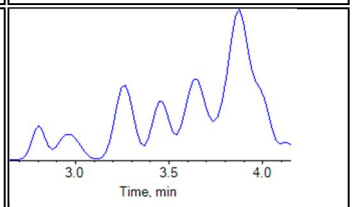
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PFOS_2



PFDA_1

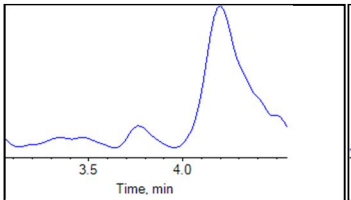


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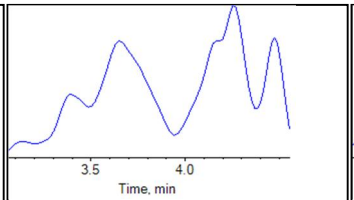
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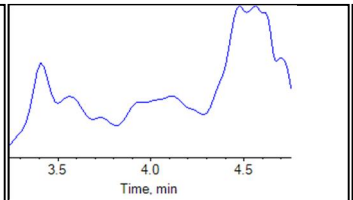
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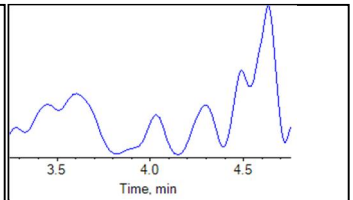
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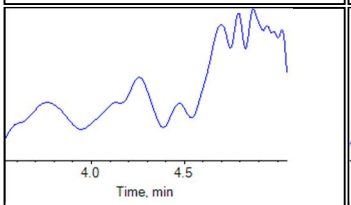
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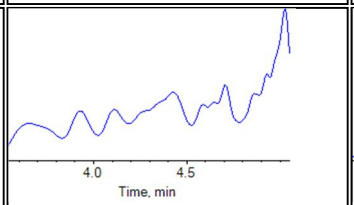
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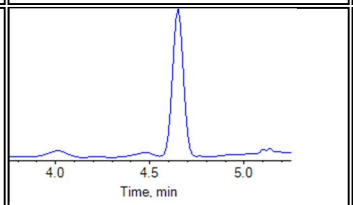
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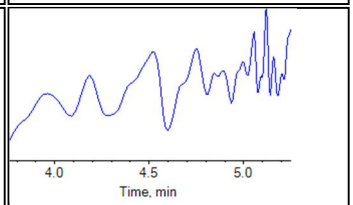
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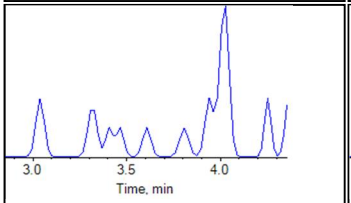
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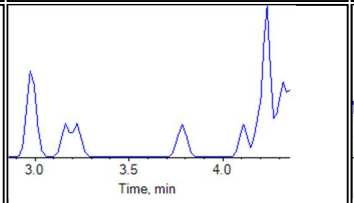
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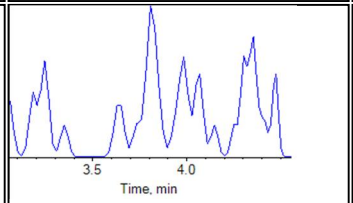
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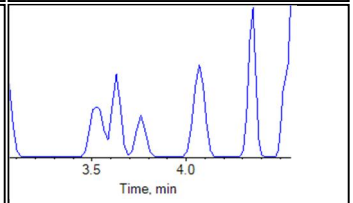
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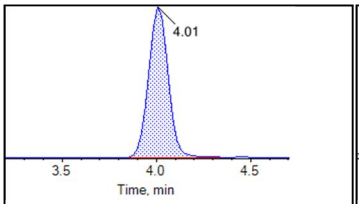


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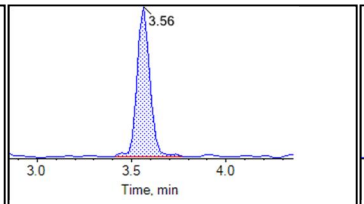


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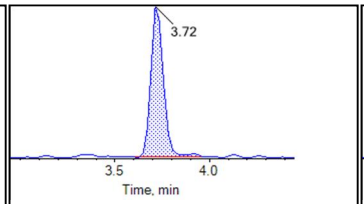
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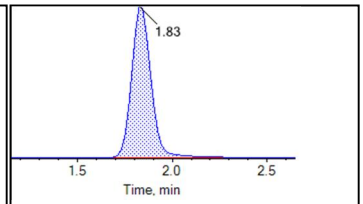
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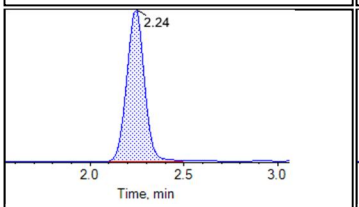
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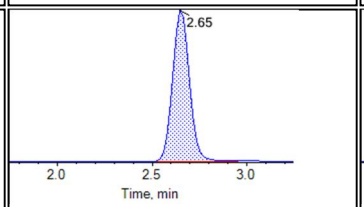
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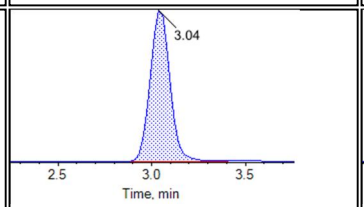
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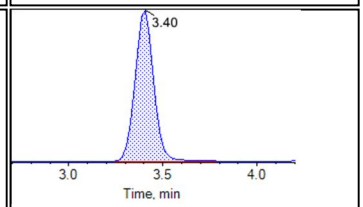
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13C8-PFOA



13C9-PFNA

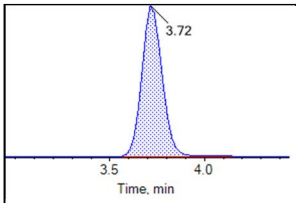


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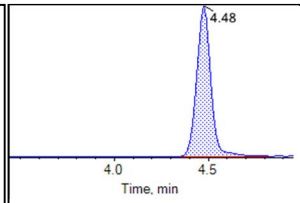
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Chromatogram Report

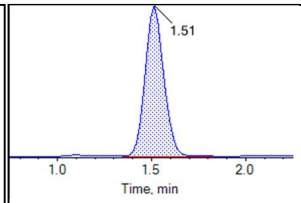
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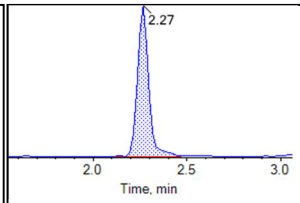
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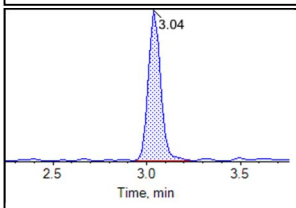
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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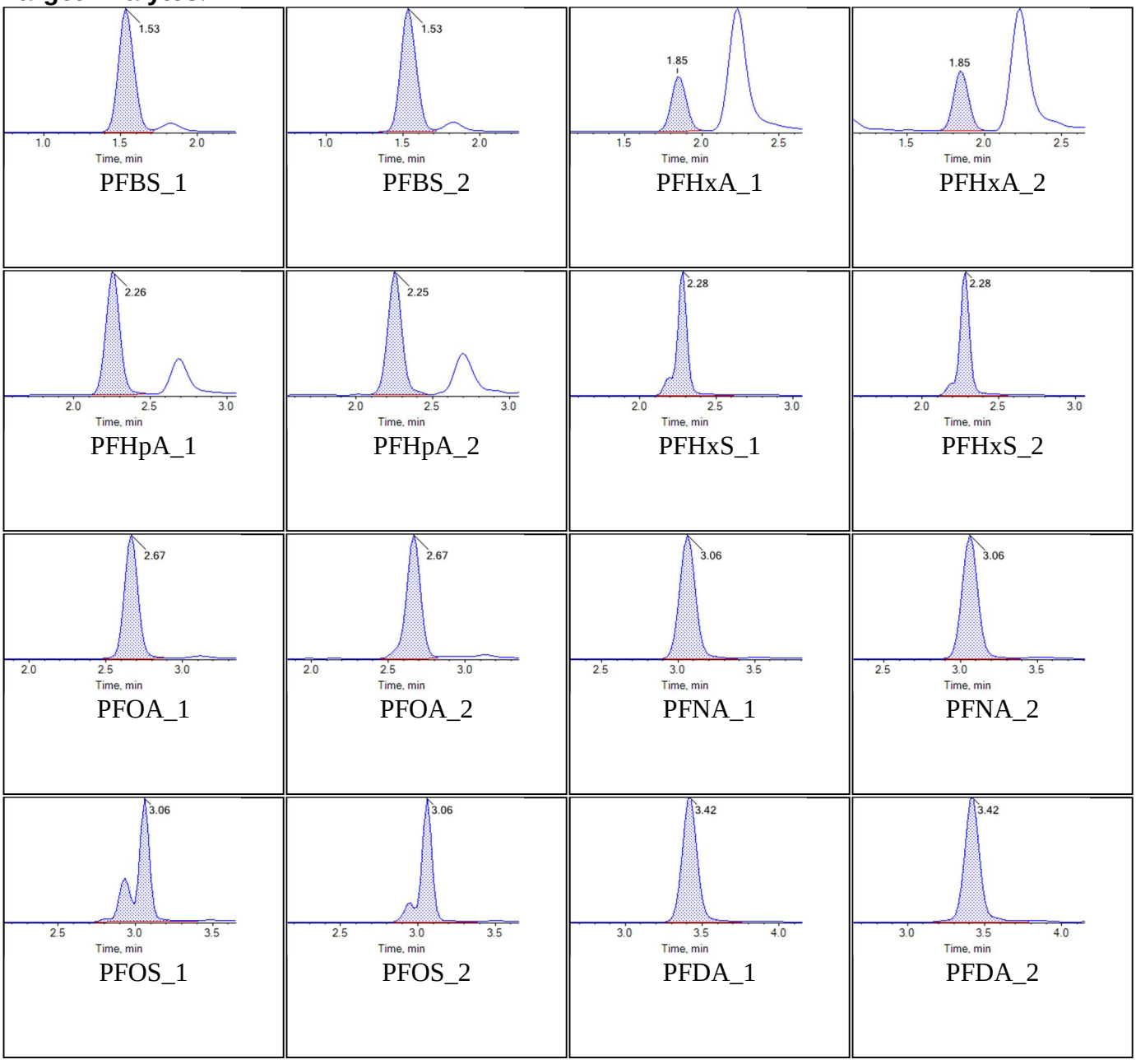
Chromatogram Report

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Sample Name	KB77 CCV	**Injection Vial**	8
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_BASE
Sample Comment			

Chromatograms

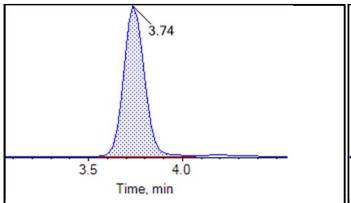
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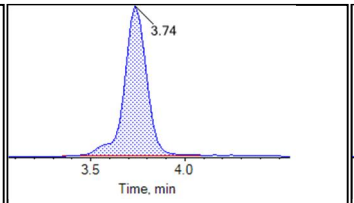
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Chromatogram Report

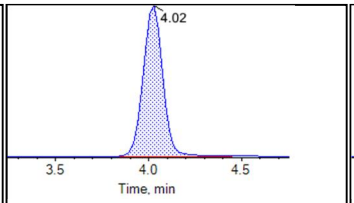
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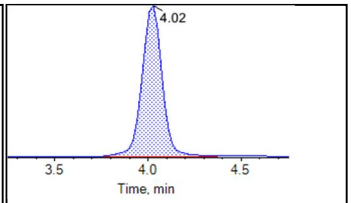
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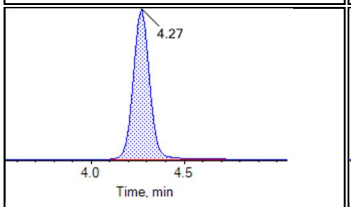
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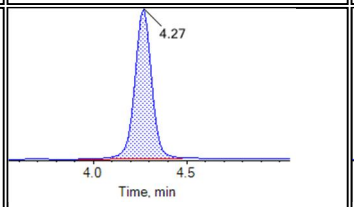
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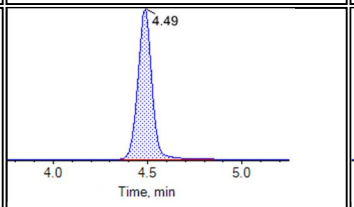
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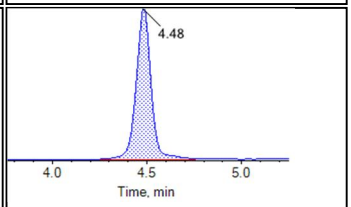
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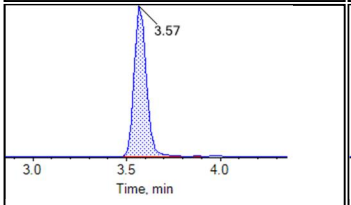
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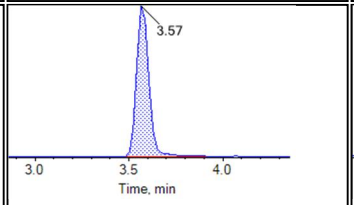
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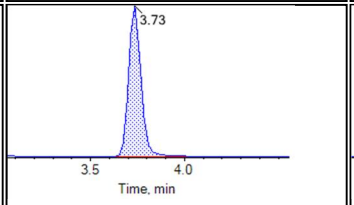
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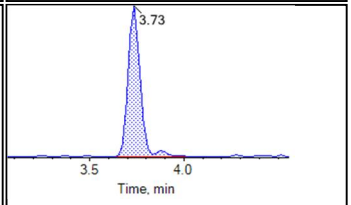
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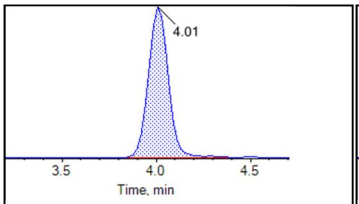


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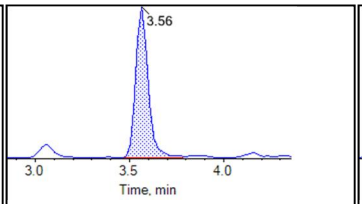


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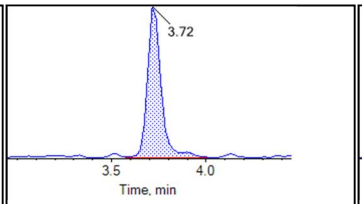
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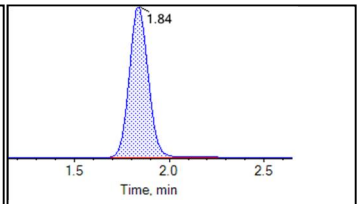
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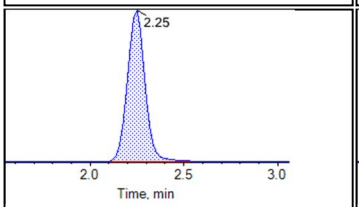
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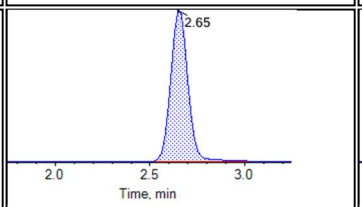
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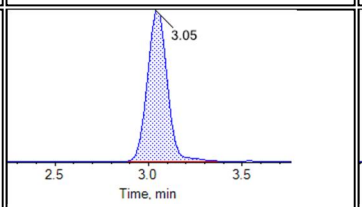
13C5-PFHxA



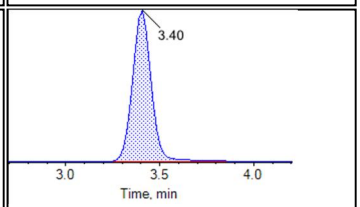
13C4-PFHpA



13C8-PFOA



13C9-PFNA

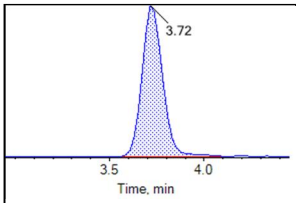


13C6-PFDA

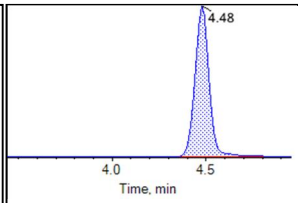
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Chromatogram Report

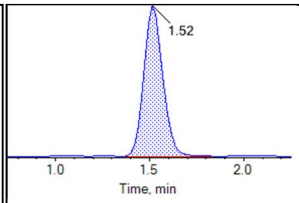
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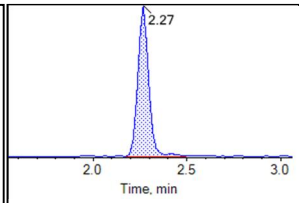
13C7-PFUnA



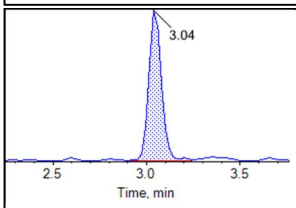
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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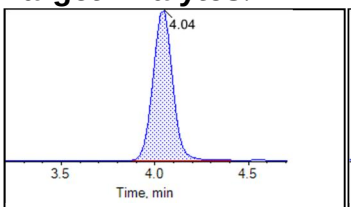
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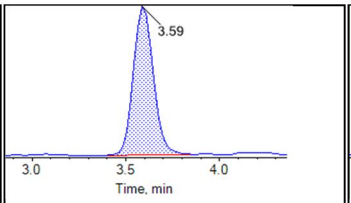
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Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:25:01	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

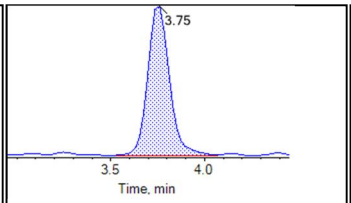
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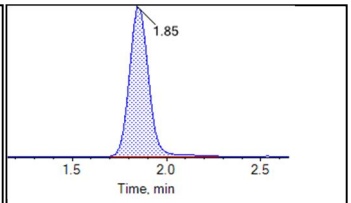
13C2-PFDoA



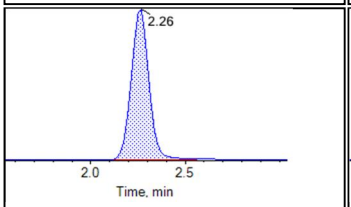
d3-MeFOSAA



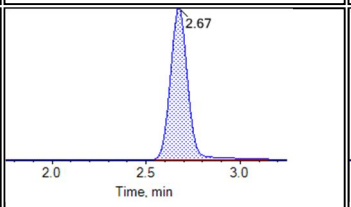
d5-EtFOSAA



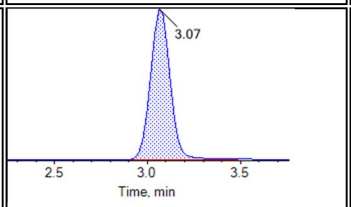
13C5-PFHxA



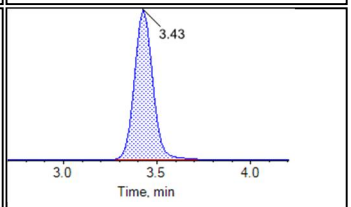
13C4-PFHpA



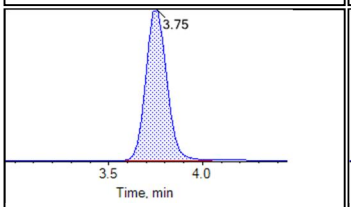
13C8-PFOA



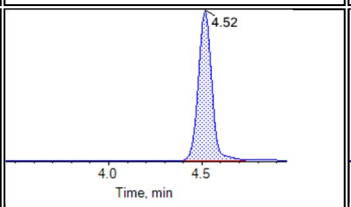
13C9-PFNA



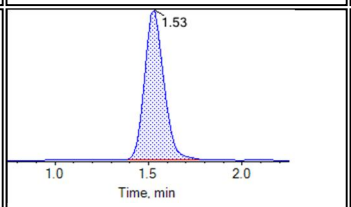
13C6-PFDA



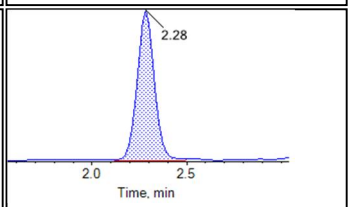
13C7-PFUnA



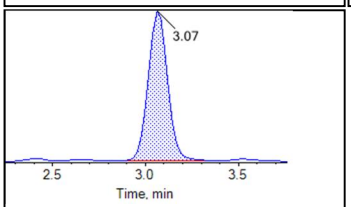
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



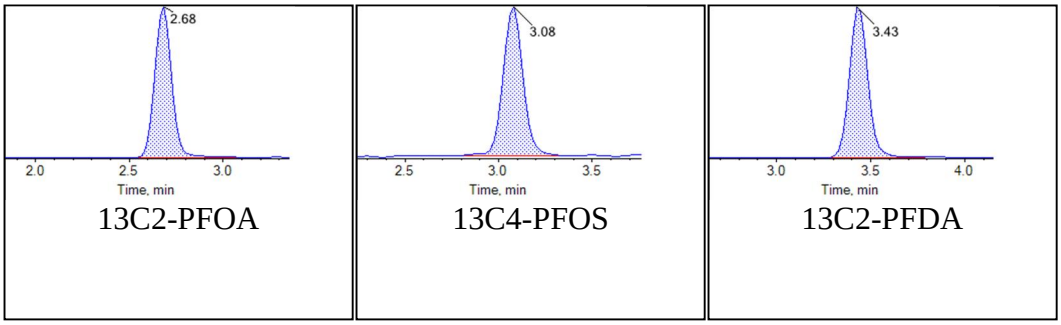
13C8-PFOS

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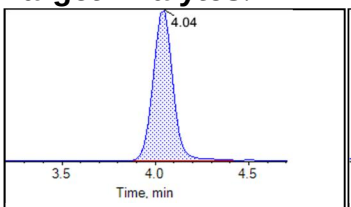
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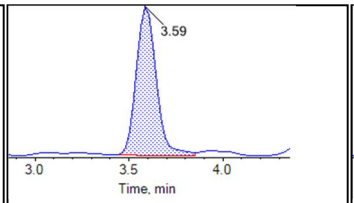
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Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:35:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

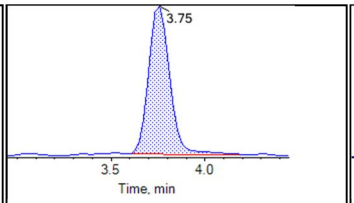
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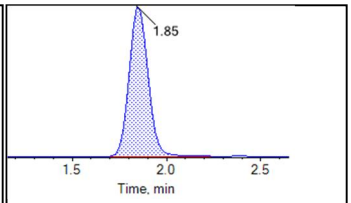
13C2-PFDoA



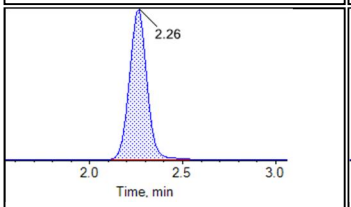
d3-MeFOSAA



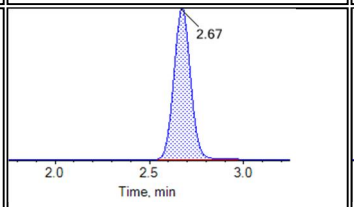
d5-EtFOSAA



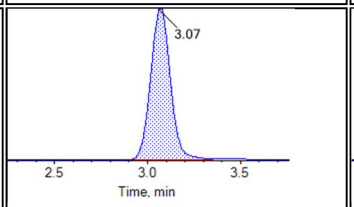
13C5-PFHxA



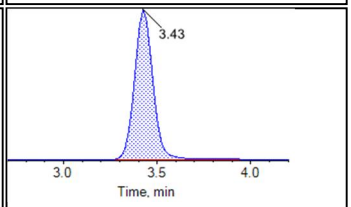
13C4-PFHpA



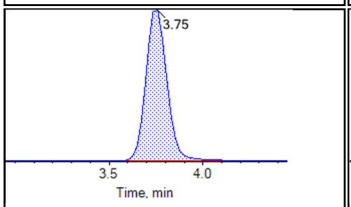
13C8-PFOA



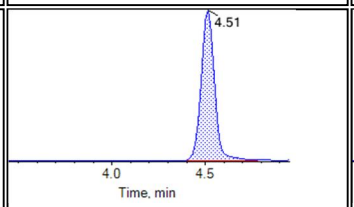
13C9-PFNA



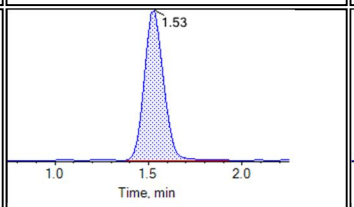
13C6-PFDA



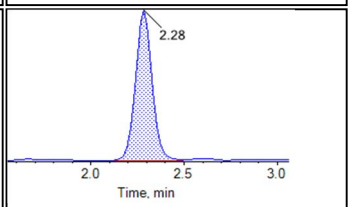
13C7-PFUnA



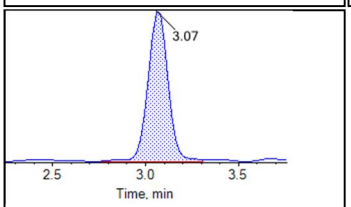
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



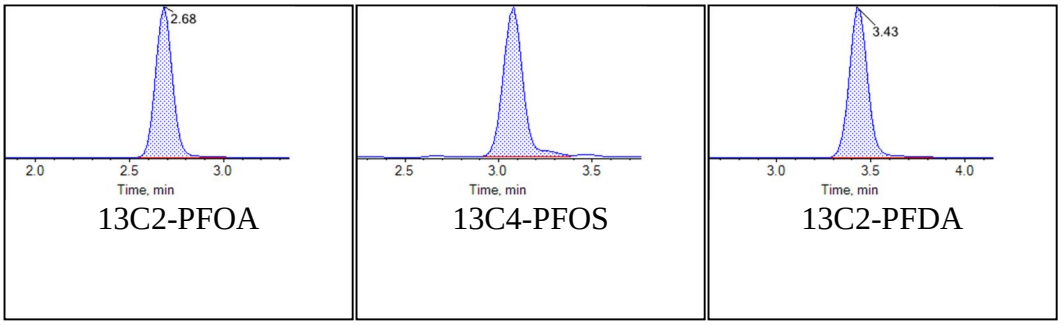
13C8-PFOS

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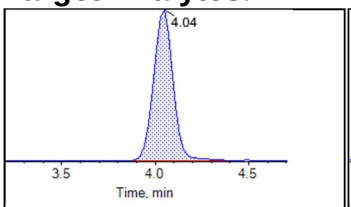
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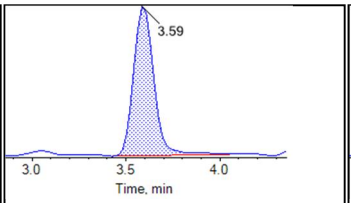
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Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:46:44	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

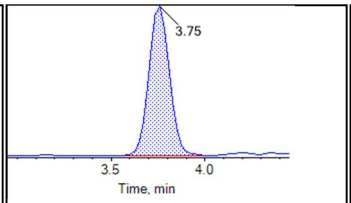
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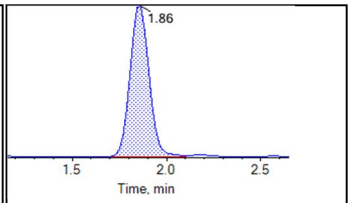
13C2-PFDoA



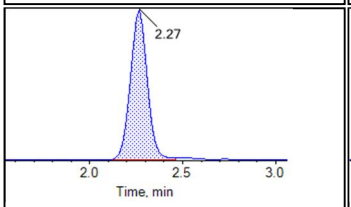
d3-MeFOSAA



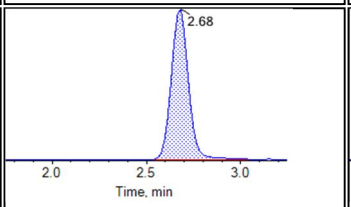
d5-EtFOSAA



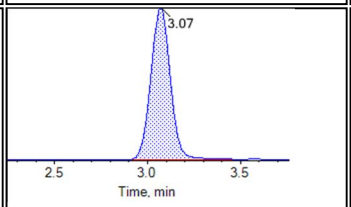
13C5-PFHxA



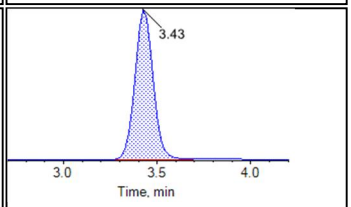
13C4-PFHpA



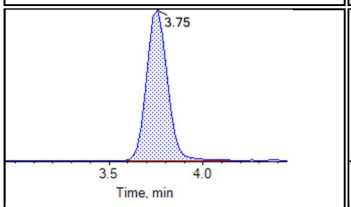
13C8-PFOA



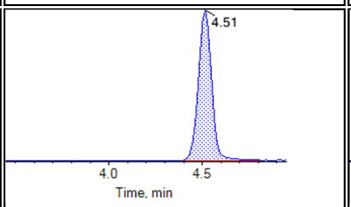
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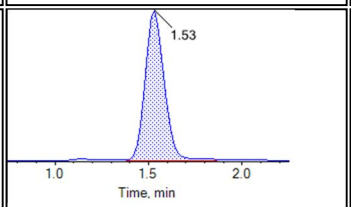
13C6-PFDA



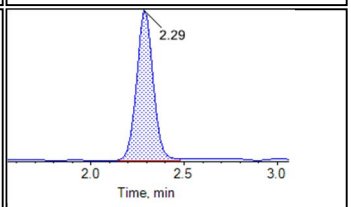
13C7-PFUnA



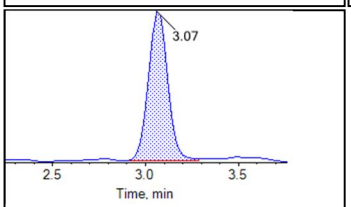
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

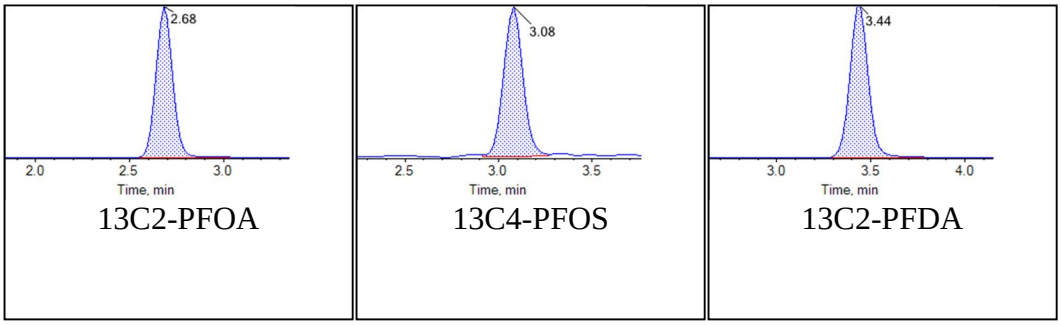


13C8-PFOS

Chromatogram Report

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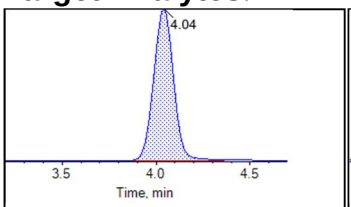
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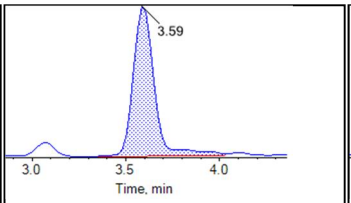
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Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T12:57:36	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

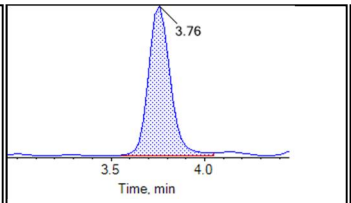
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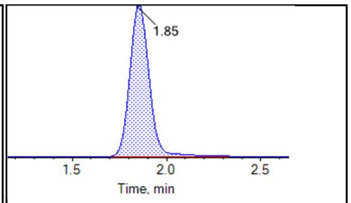
13C2-PFDoA



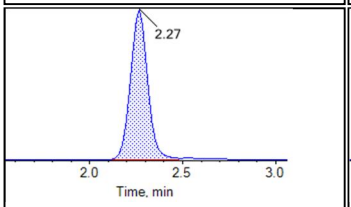
d3-MeFOSAA



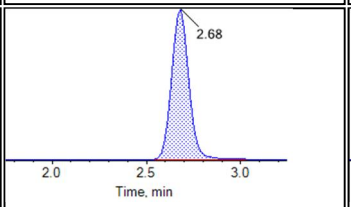
d5-EtFOSAA



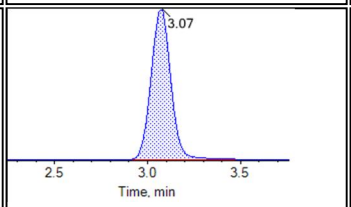
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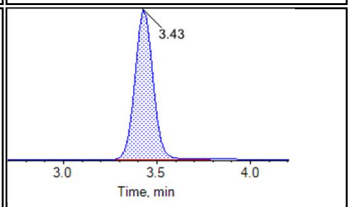
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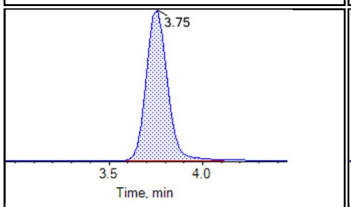
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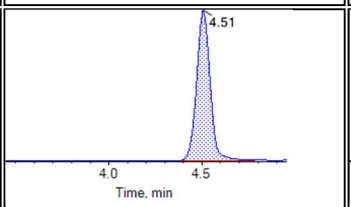
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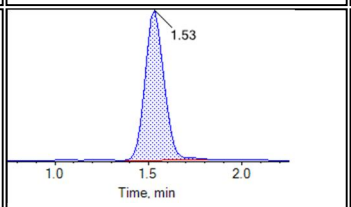
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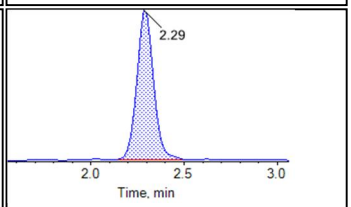
13C7-PFUnA



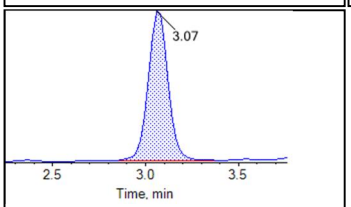
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

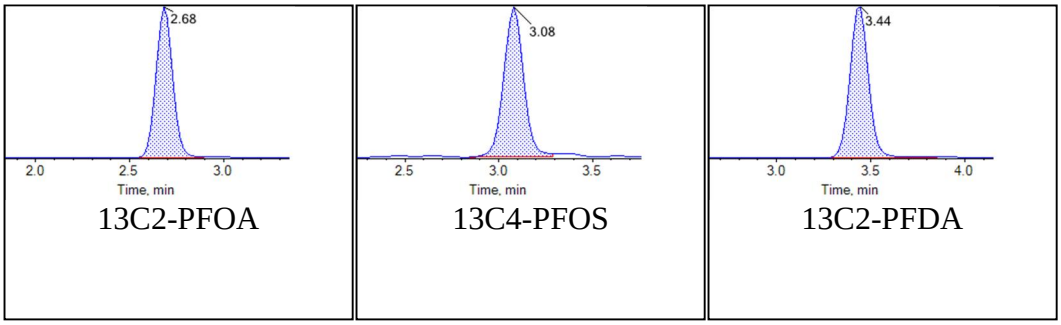


13C8-PFOS

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Internal Standards:



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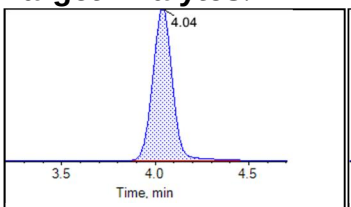
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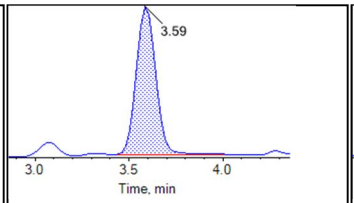
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Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:08:28	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

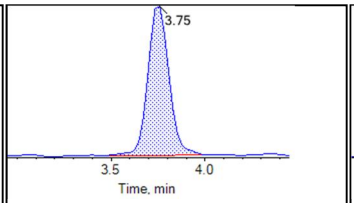
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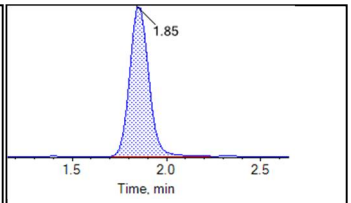
13C2-PFDoA



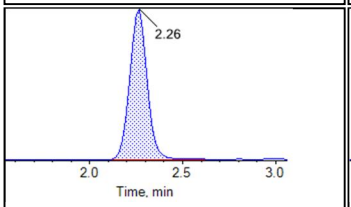
d3-MeFOSAA



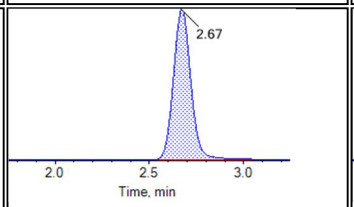
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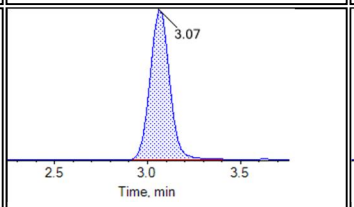
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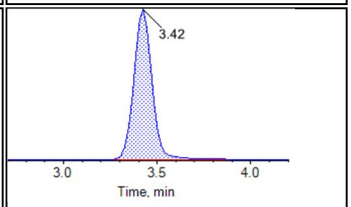
13C4-PFHpA



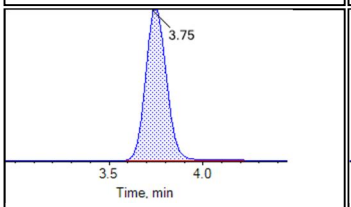
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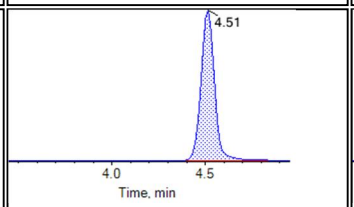
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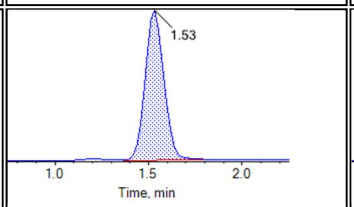
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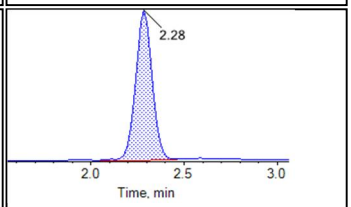
13C7-PFUnA



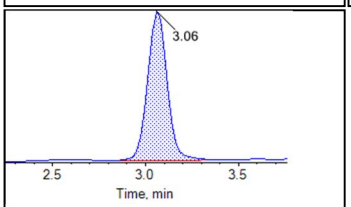
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



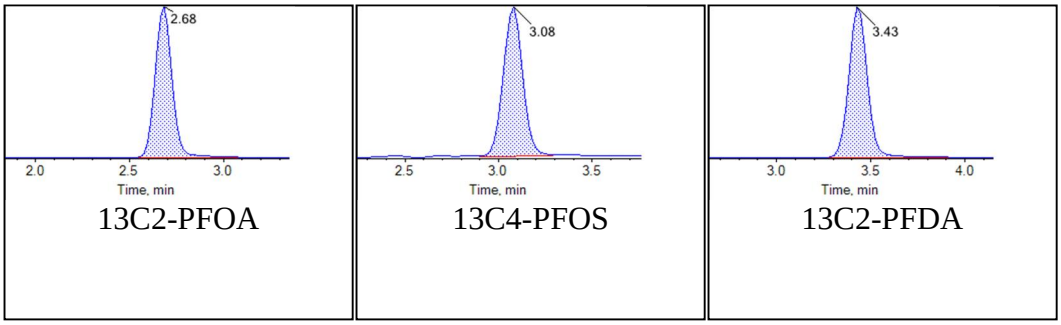
13C8-PFOS

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Internal Standards:



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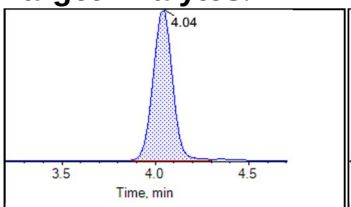
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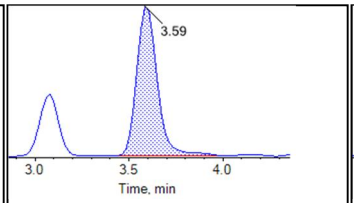
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Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:19:19	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

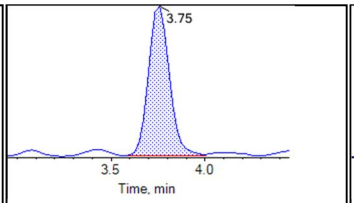
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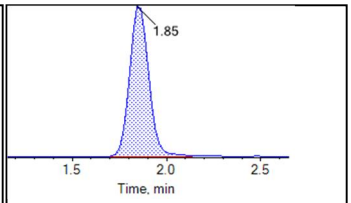
13C2-PFDoA



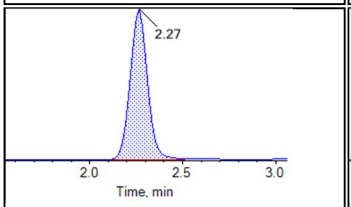
d3-MeFOSAA



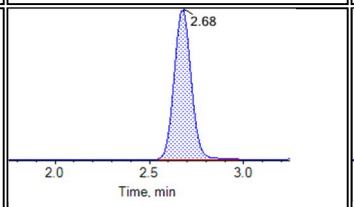
d5-EtFOSAA



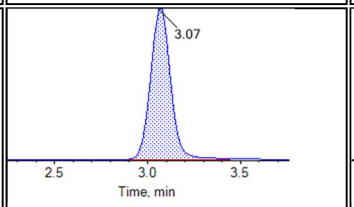
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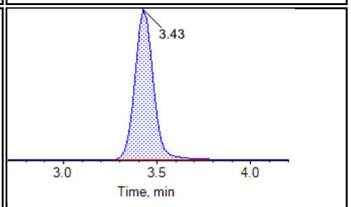
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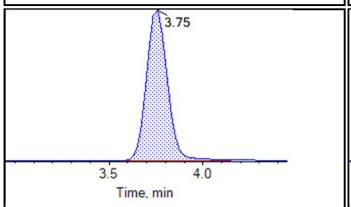
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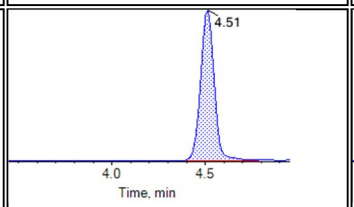
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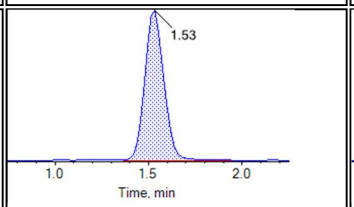
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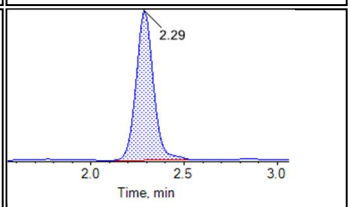
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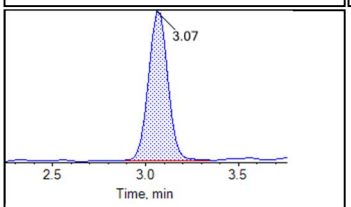
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



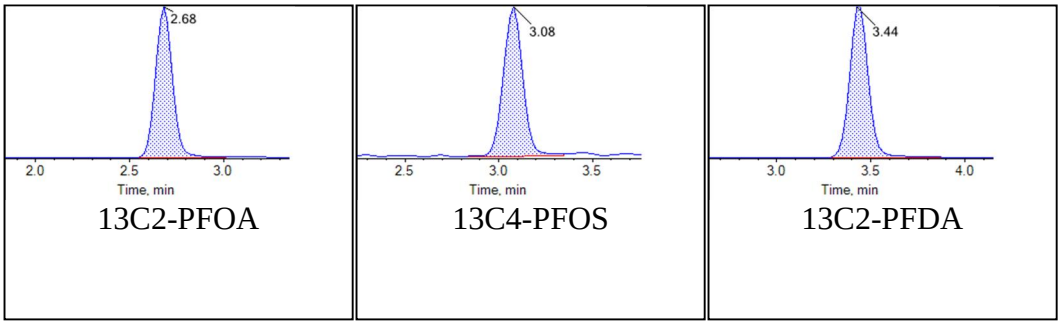
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Internal Standards:



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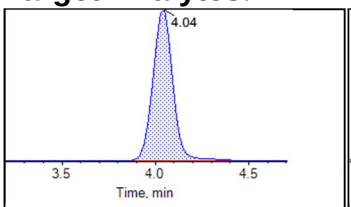
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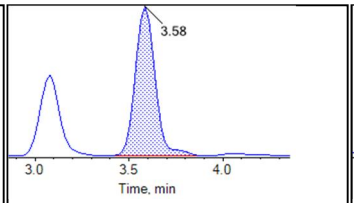
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Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
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Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

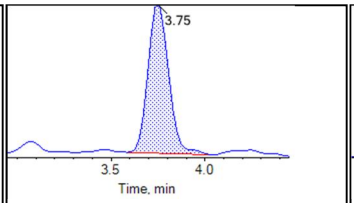
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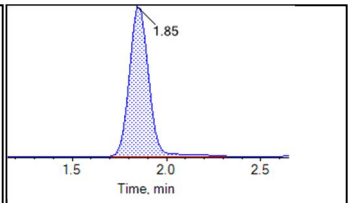
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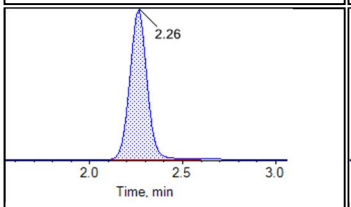
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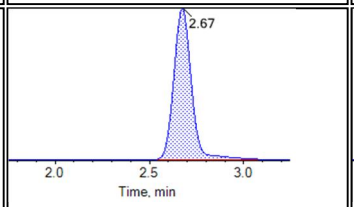
d5-EtFOSAA



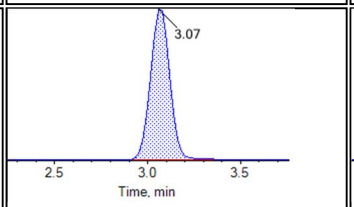
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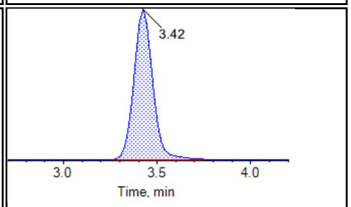
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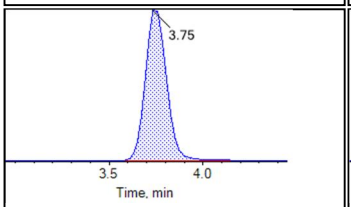
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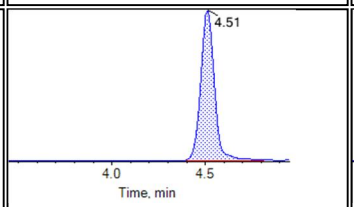
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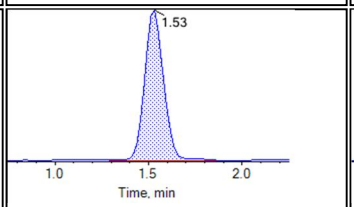
13C6-PFDA



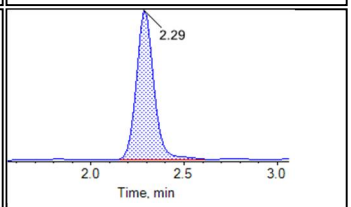
13C7-PFUnA



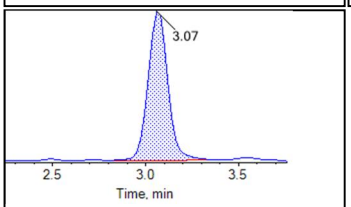
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



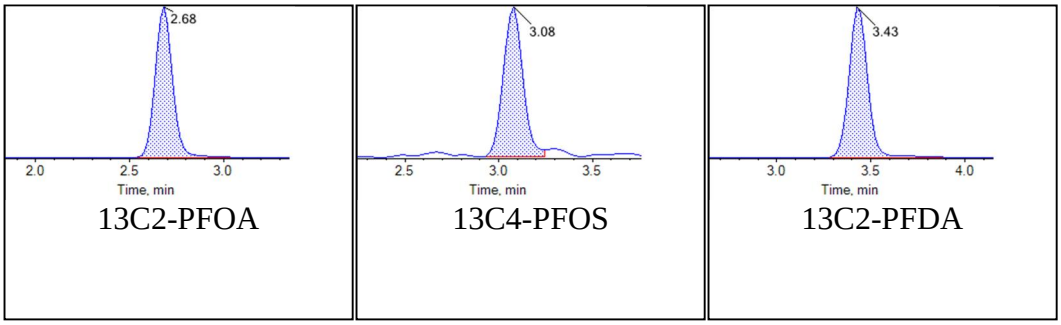
13C8-PFOS

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Chromatogram Report

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Internal Standards:



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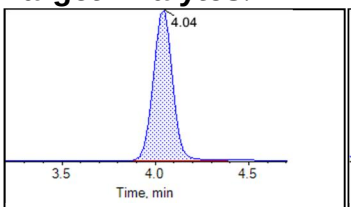
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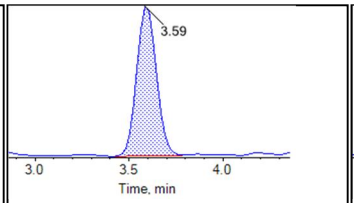
Sample Name	KB80 IB	**Injection Vial**	9
Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:41:02	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

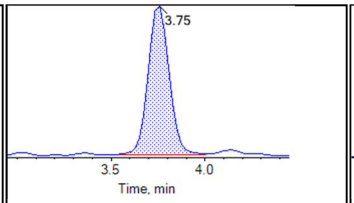
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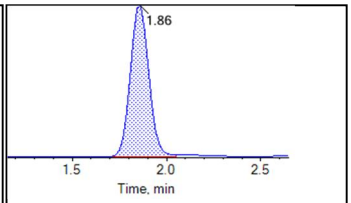
13C2-PFDoA



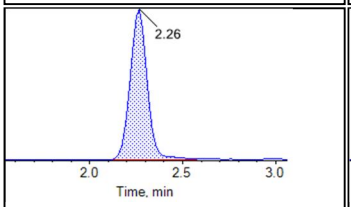
d3-MeFOSAA



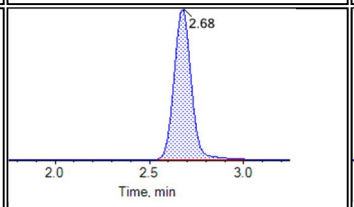
d5-EtFOSAA



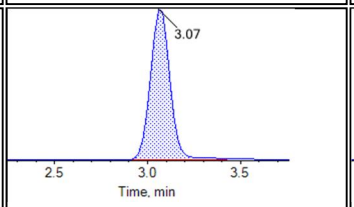
13C5-PFHxA



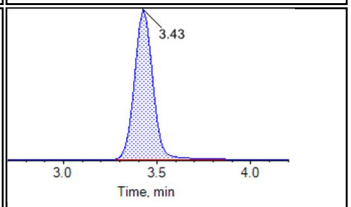
13C4-PFHpA



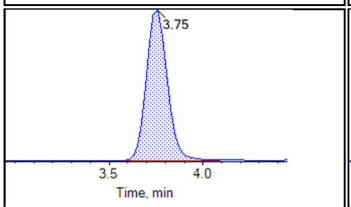
13C8-PFOA



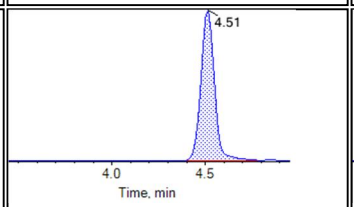
13C9-PFNA



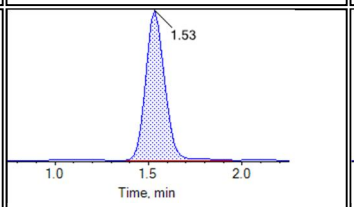
13C6-PFDA



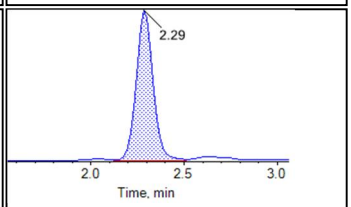
13C7-PFUnA



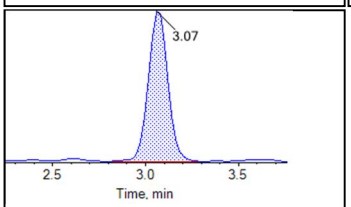
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



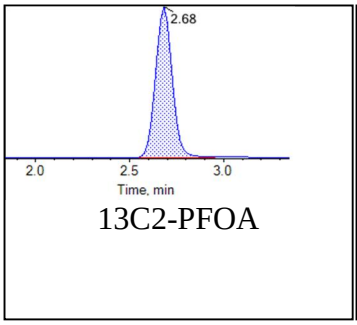
13C8-PFOS

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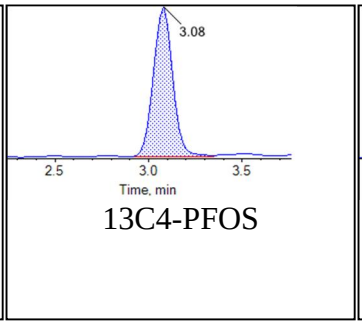
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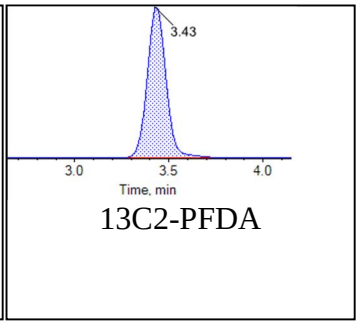
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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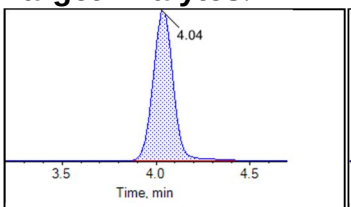
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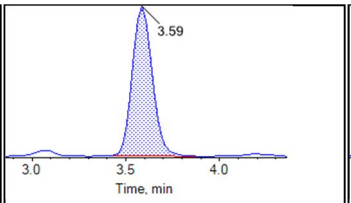
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Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T13:51:53	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

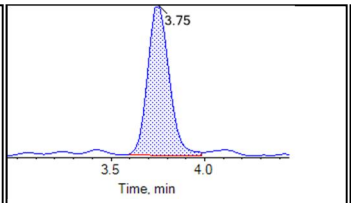
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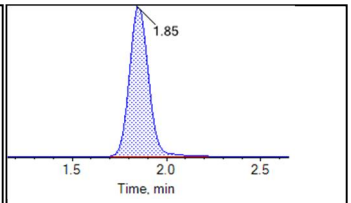
13C2-PFDoA



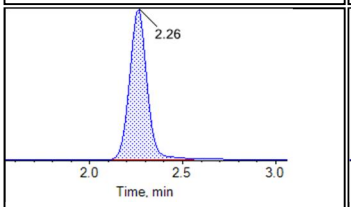
d3-MeFOSAA



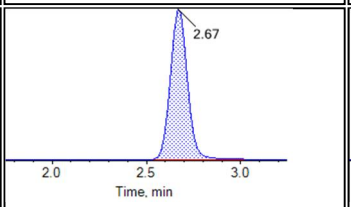
d5-EtFOSAA



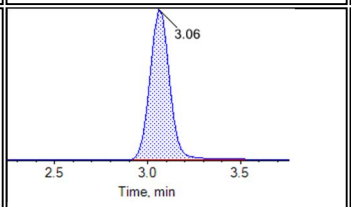
13C5-PFHxA



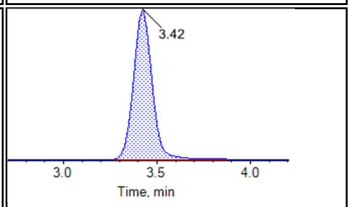
13C4-PFHpA



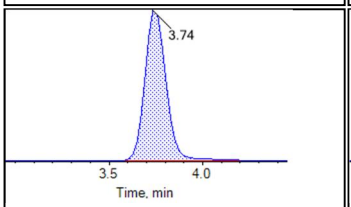
13C8-PFOA



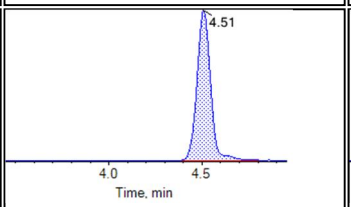
13C9-PFNA



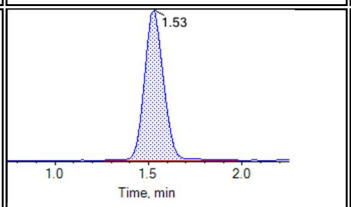
13C6-PFDA



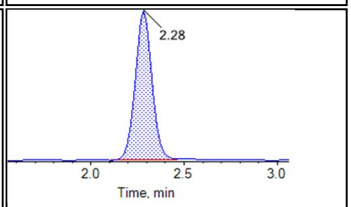
13C7-PFUnA



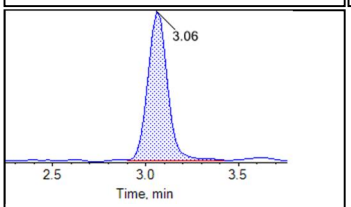
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

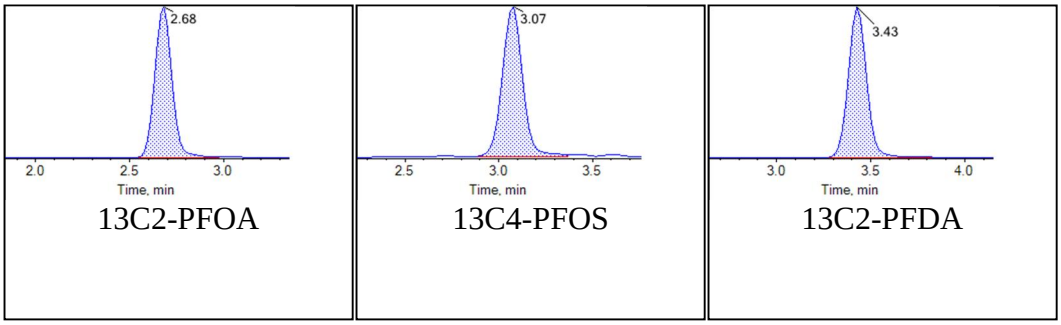


13C8-PFOS

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Internal Standards:



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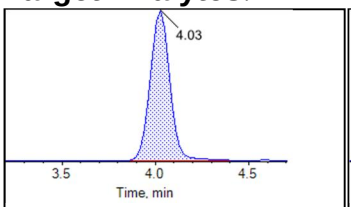
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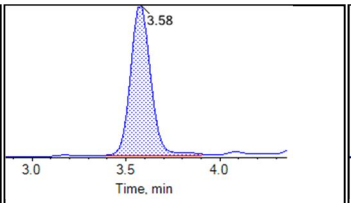
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Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:24:29	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

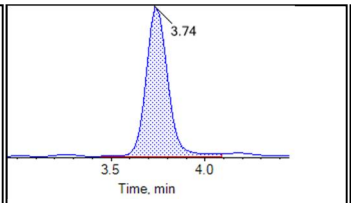
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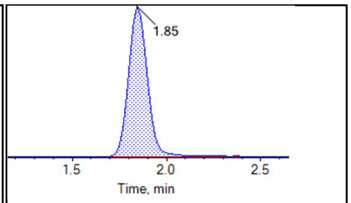
13C2-PFDoA



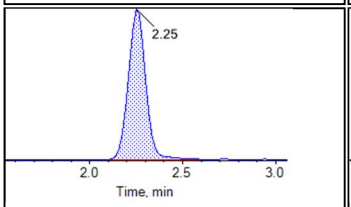
d3-MeFOSAA



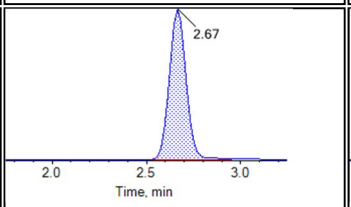
d5-EtFOSAA



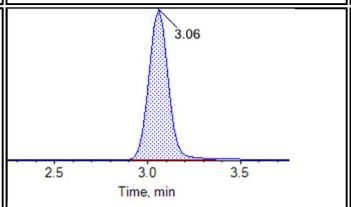
13C5-PFHxA



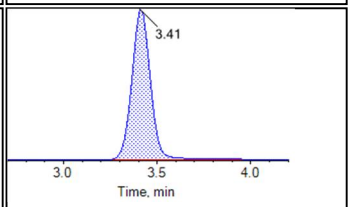
13C4-PFHpA



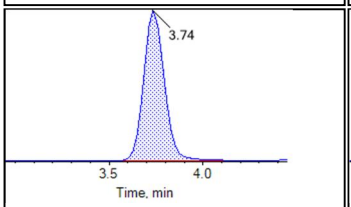
13C8-PFOA



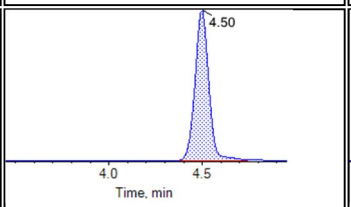
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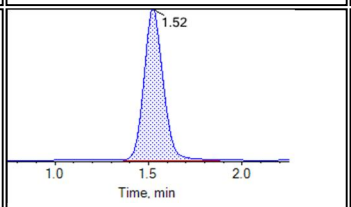
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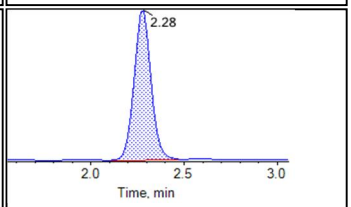
13C7-PFUnA



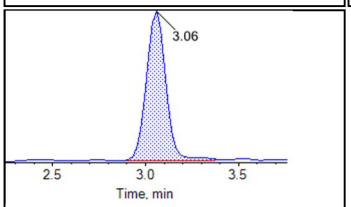
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



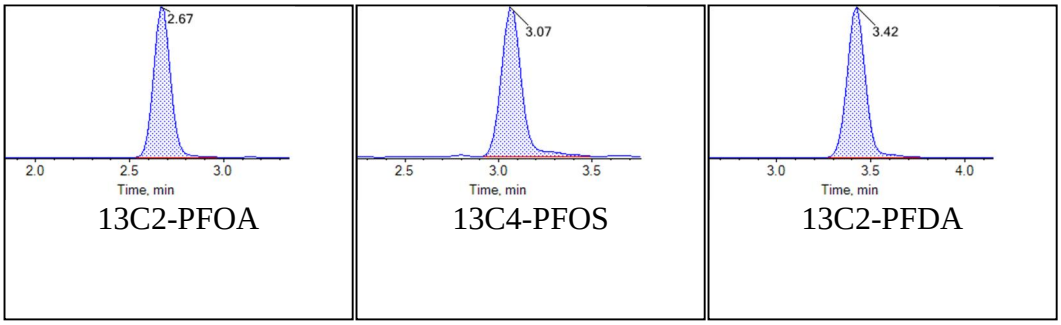
13C8-PFOS

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Internal Standards:



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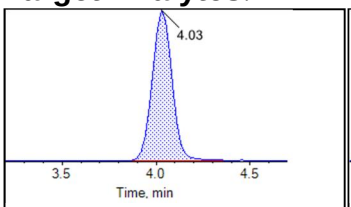
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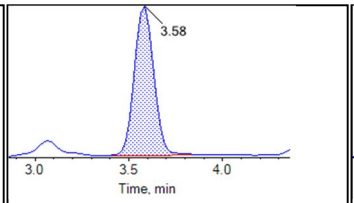
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Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:35:21	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

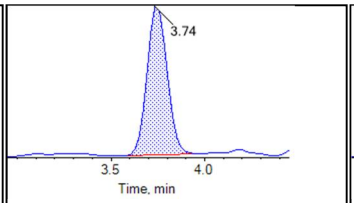
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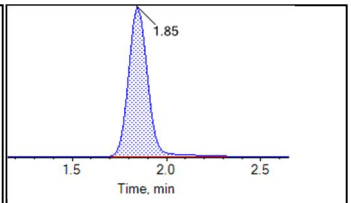
13C2-PFDoA



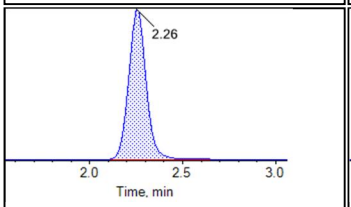
d3-MeFOSAA



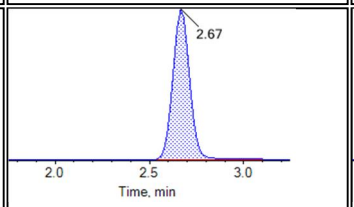
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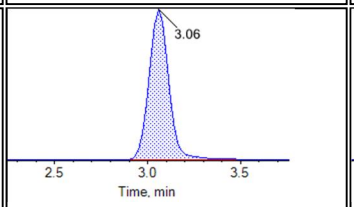
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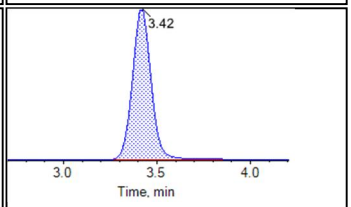
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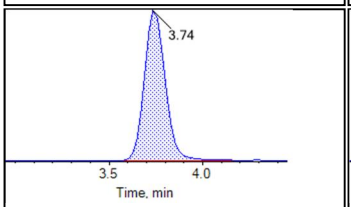
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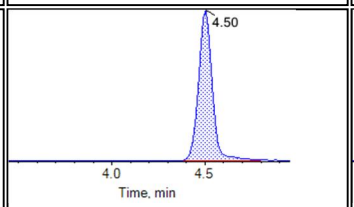
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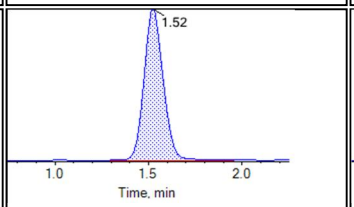
13C6-PFDA



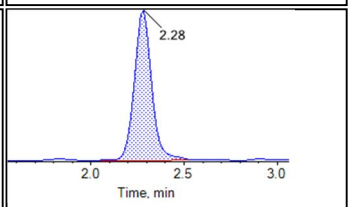
13C7-PFUnA



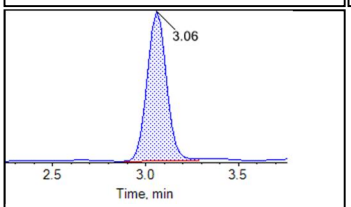
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



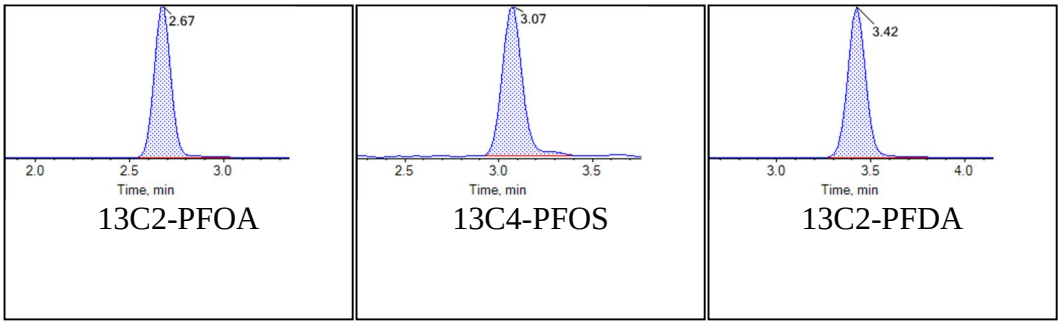
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Chromatogram Report

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Internal Standards:



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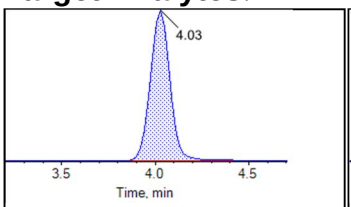
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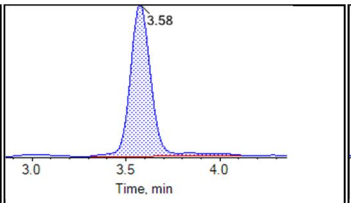
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Sample ID	VC-PM64B-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:46:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

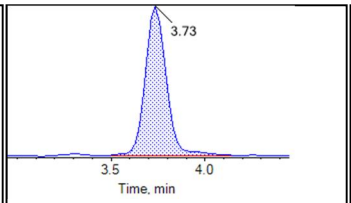
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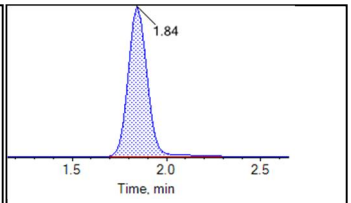
13C2-PFDoA



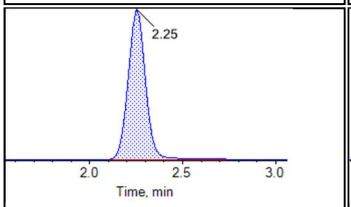
d3-MeFOSAA



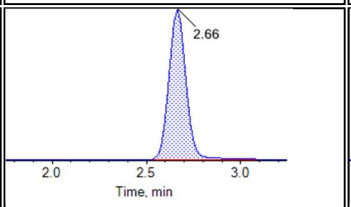
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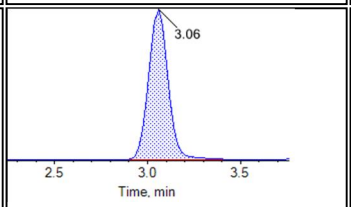
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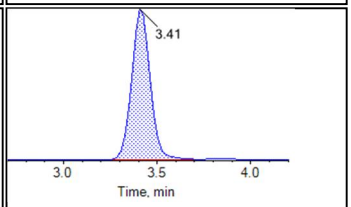
13C4-PFHpA



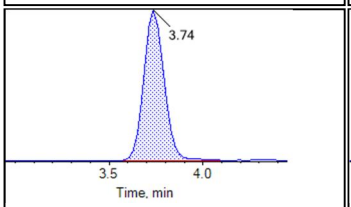
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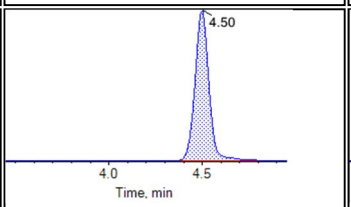
13C9-PFNA



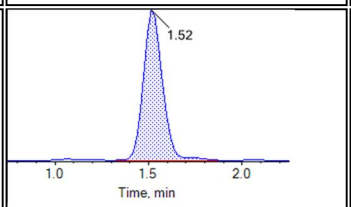
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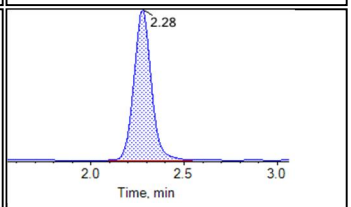
13C7-PFUnA



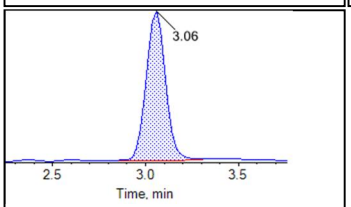
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



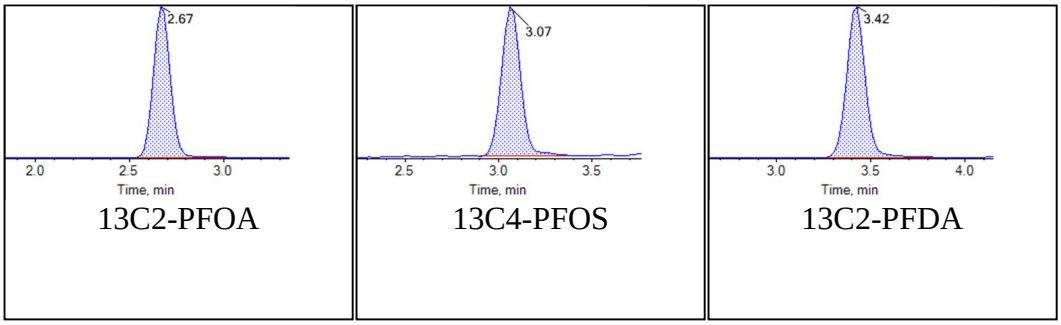
13C8-PFOS

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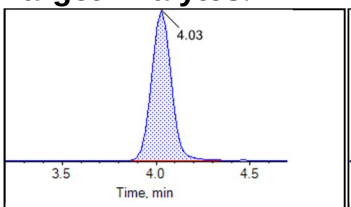
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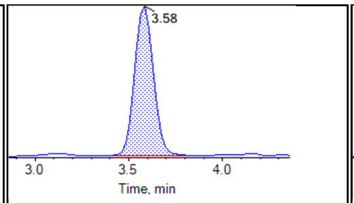
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Sample ID	VC-HS09-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T14:57:04	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

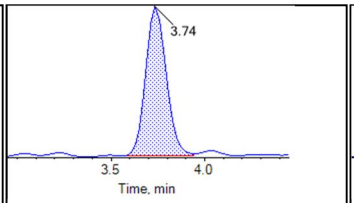
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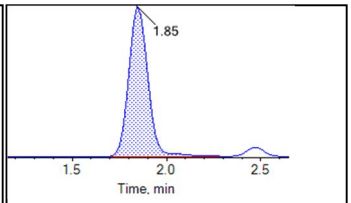
13C2-PFDoA



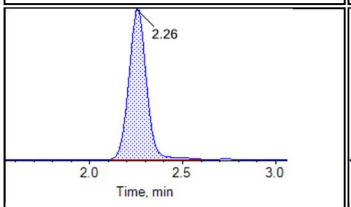
d3-MeFOSAA



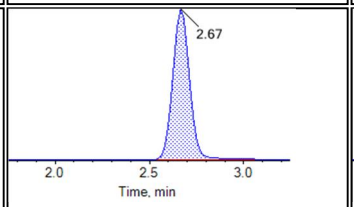
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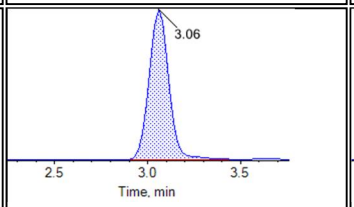
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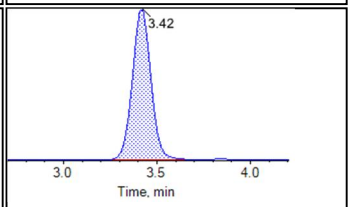
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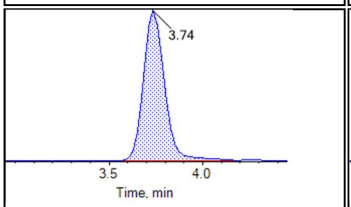
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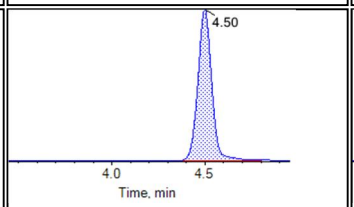
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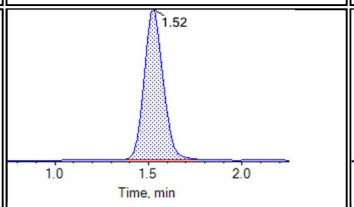
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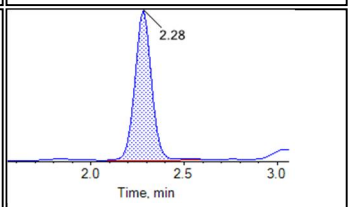
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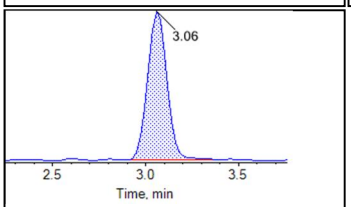
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

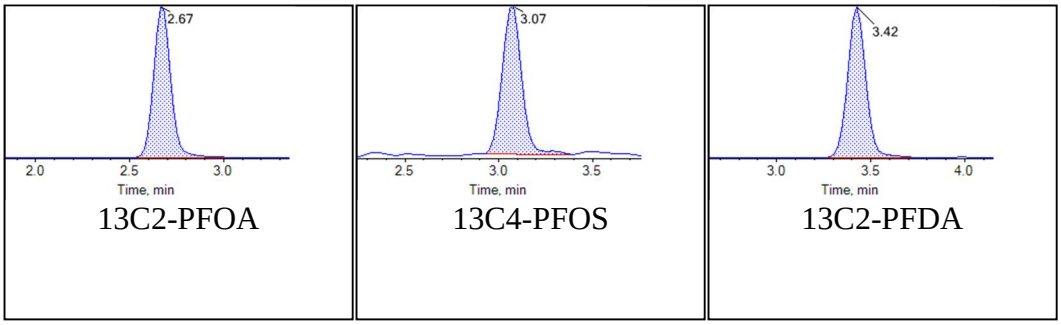


13C8-PFOS

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Internal Standards:



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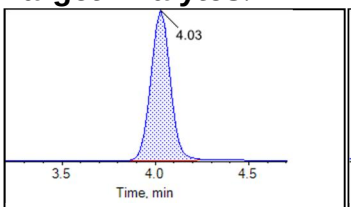
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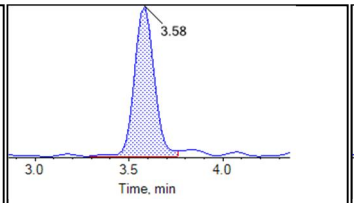
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Sample ID	VC-HS09-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:07:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

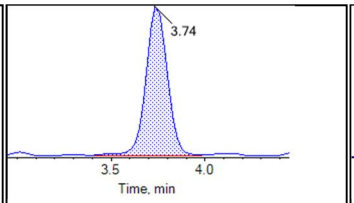
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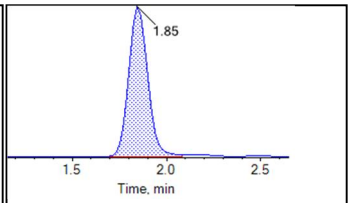
13C2-PFDoA



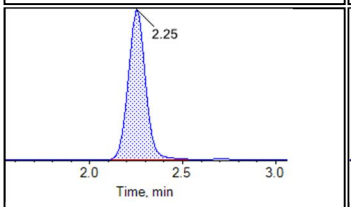
d3-MeFOSAA



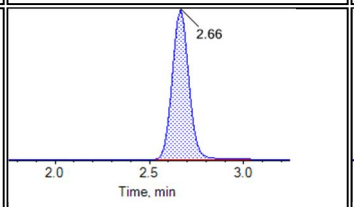
d5-EtFOSAA



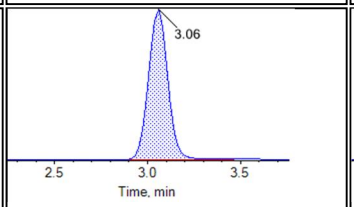
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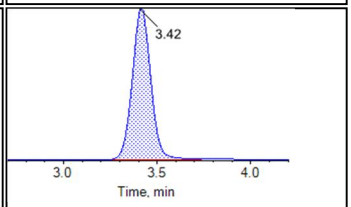
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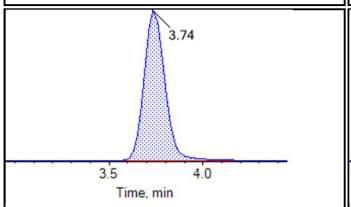
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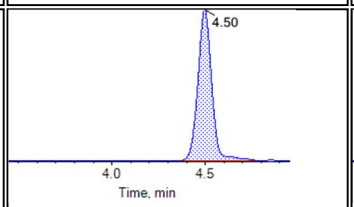
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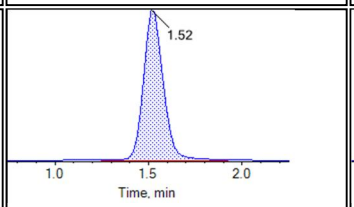
13C6-PFDA



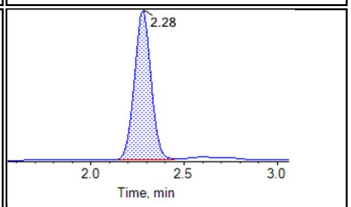
13C7-PFUnA



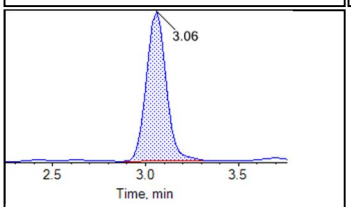
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



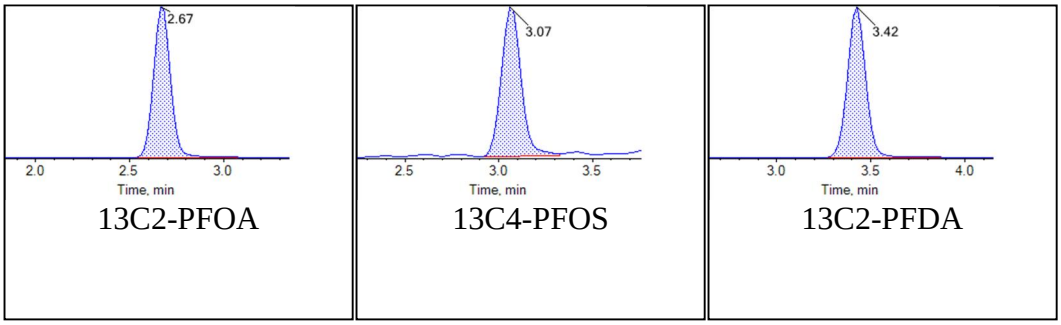
13C8-PFOS

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Internal Standards:



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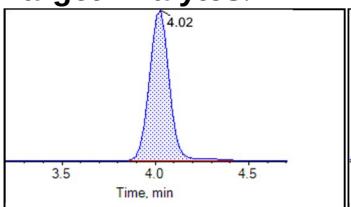
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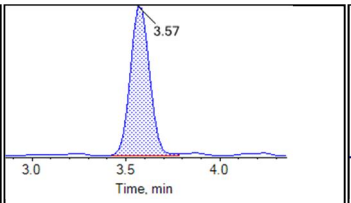
Sample Name	J8388-FS(3)	**Injection Vial**	30
Sample ID	VC-HS09-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:18:49	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

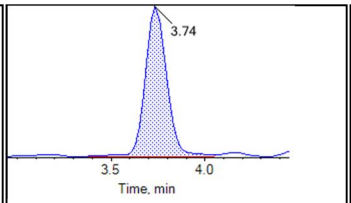
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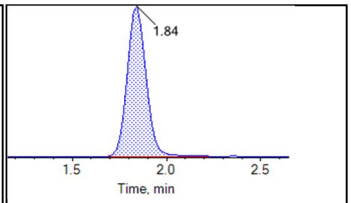
13C2-PFDoA



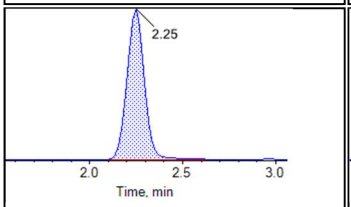
d3-MeFOSAA



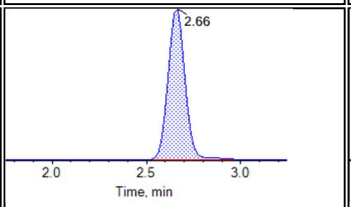
d5-EtFOSAA



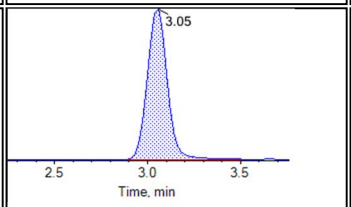
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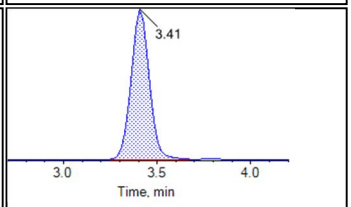
13C4-PFHpA



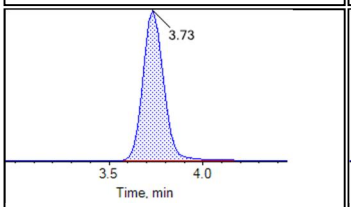
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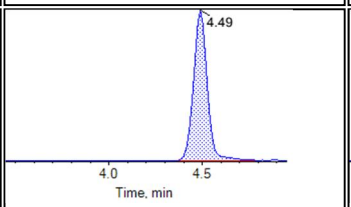
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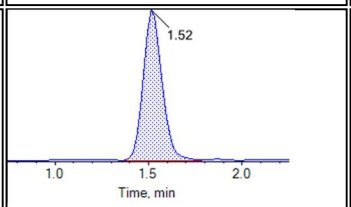
13C6-PFDA



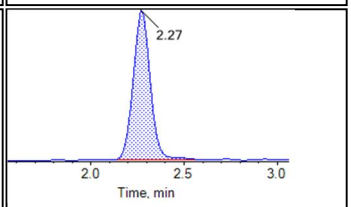
13C7-PFUnA



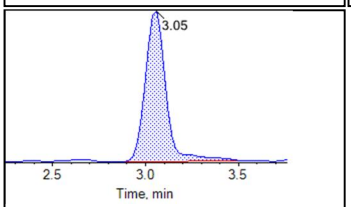
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

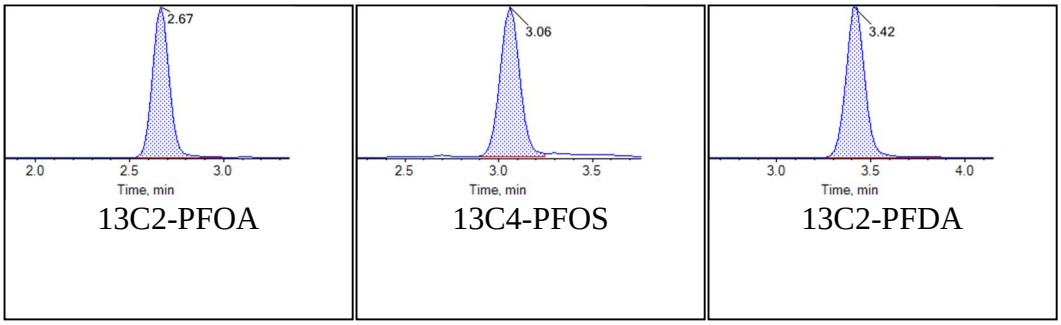


13C8-PFOS

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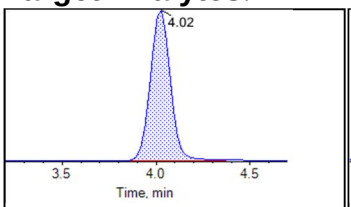
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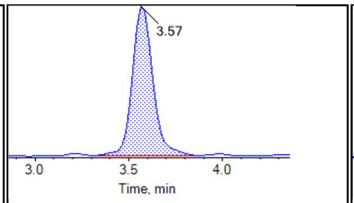
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Sample ID	VC-HS09-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:29:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

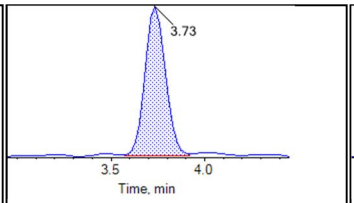
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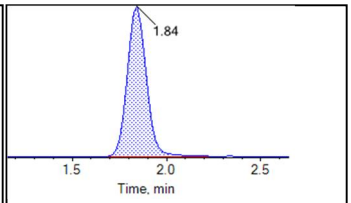
13C2-PFDoA



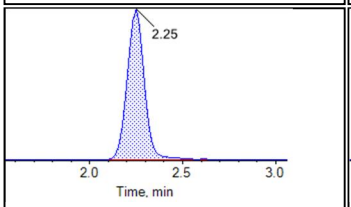
d3-MeFOSAA



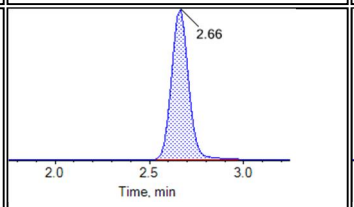
d5-EtFOSAA



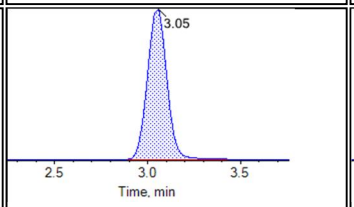
13C5-PFHxA



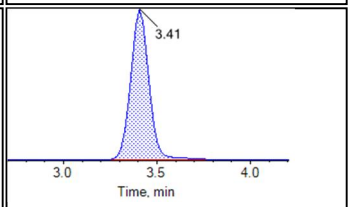
13C4-PFHpA



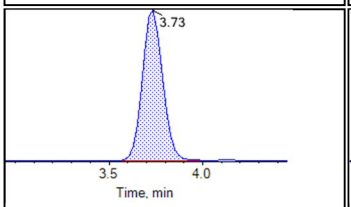
13C8-PFOA



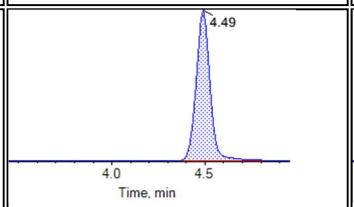
13C9-PFNA



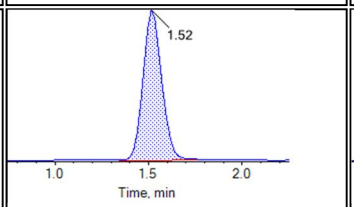
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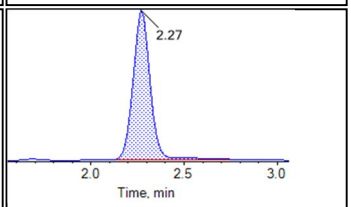
13C7-PFUnA



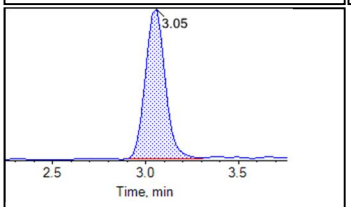
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



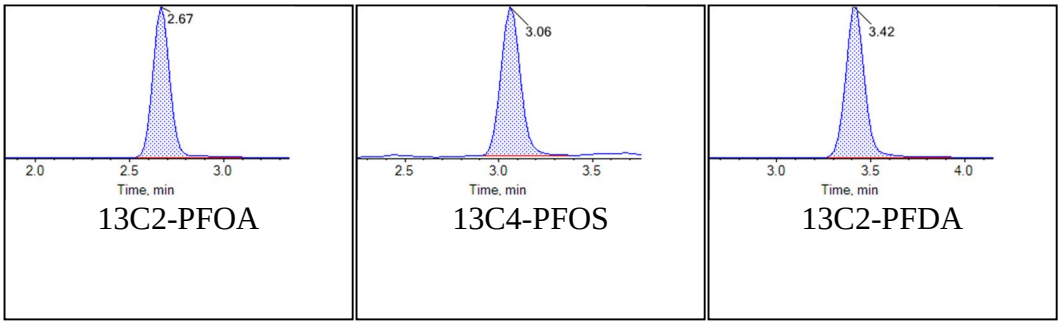
13C8-PFOS

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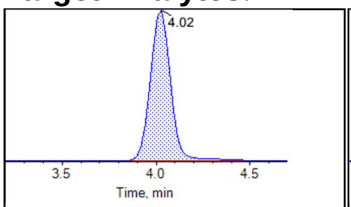
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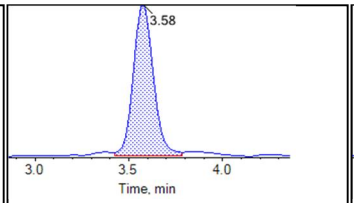
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Sample ID	VC-HS09-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:40:32	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

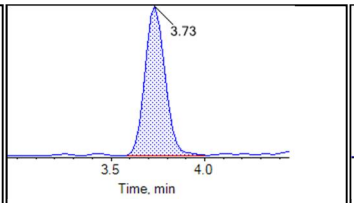
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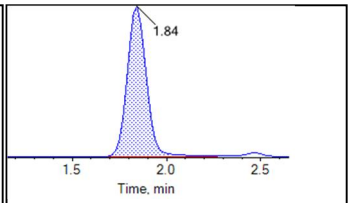
13C2-PFDoA



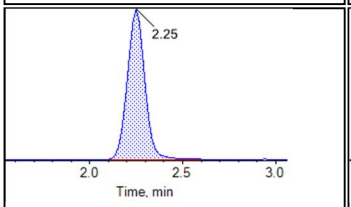
d3-MeFOSAA



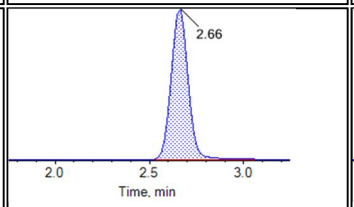
d5-EtFOSAA



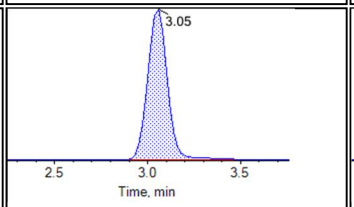
13C5-PFHxA



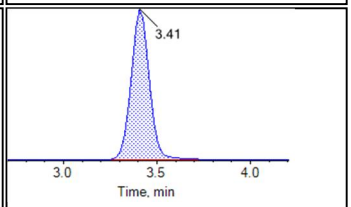
13C4-PFHpA



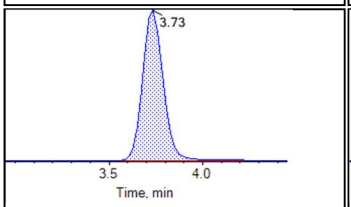
13C8-PFOA



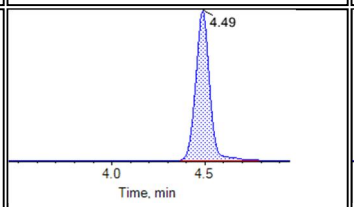
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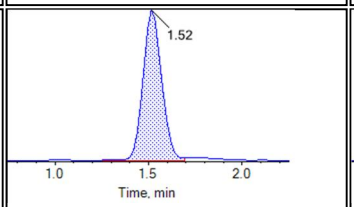
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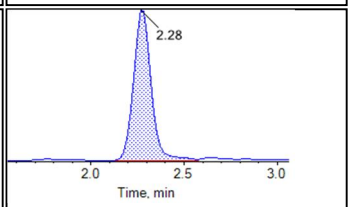
13C7-PFUnA



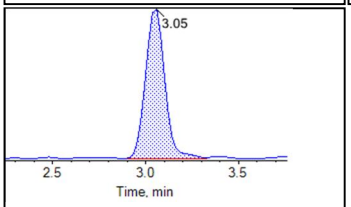
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



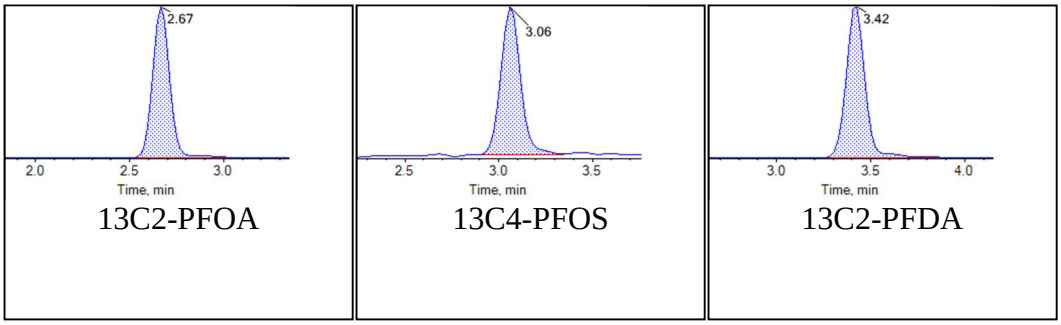
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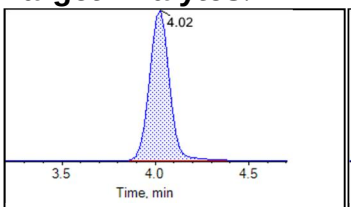
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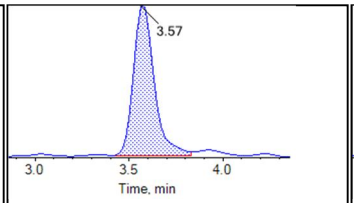
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Sample ID	VC-HS09-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T15:51:23	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

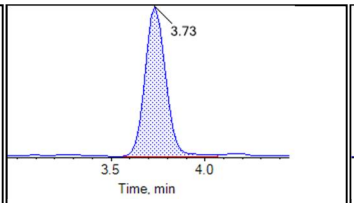
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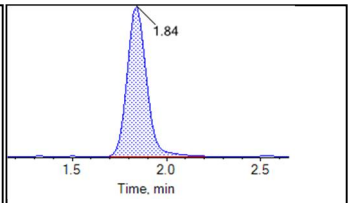
13C2-PFDoA



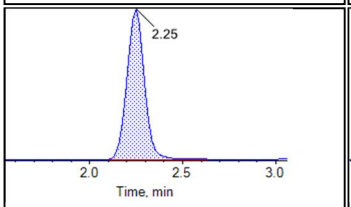
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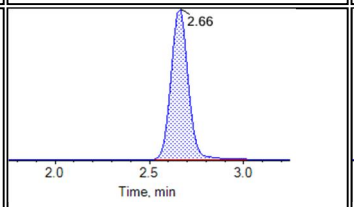
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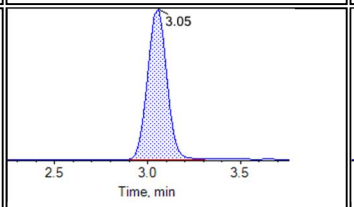
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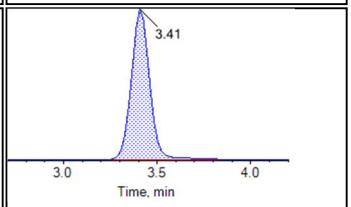
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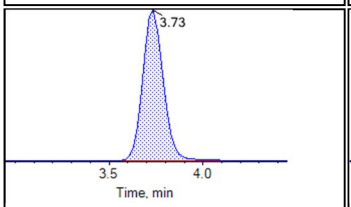
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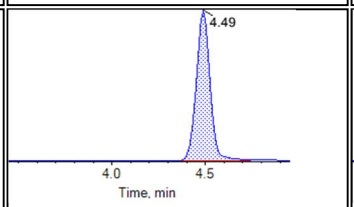
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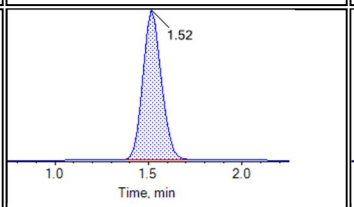
13C6-PFDA



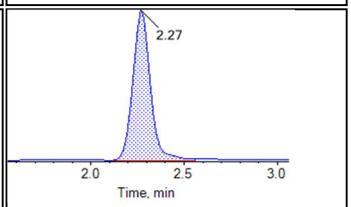
13C7-PFUnA



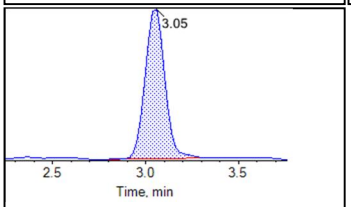
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

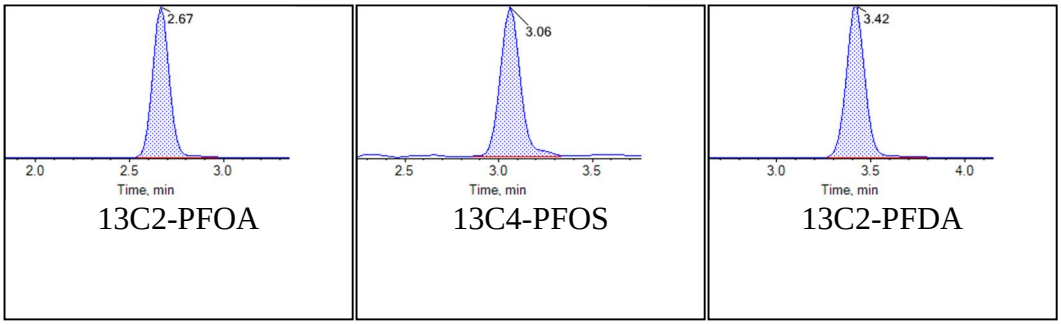


13C8-PFOS

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Internal Standards:



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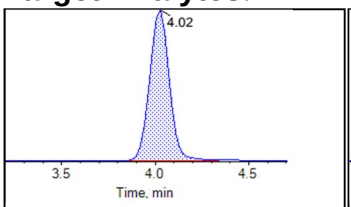
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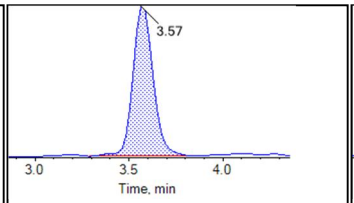
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Sample ID	VC-HS09-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:02:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

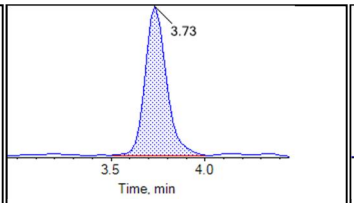
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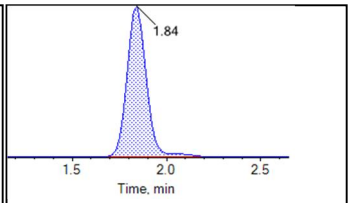
13C2-PFDoA



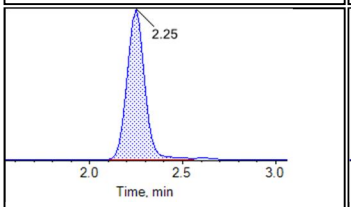
d3-MeFOSAA



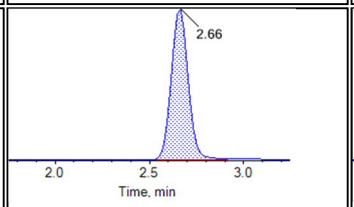
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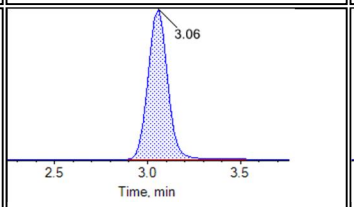
13C5-PFHxA



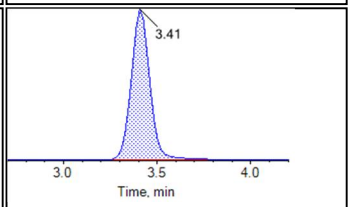
13C4-PFHpA



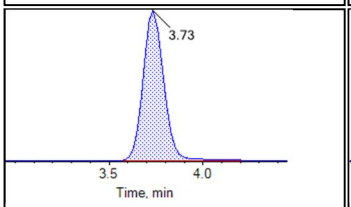
13C8-PFOA



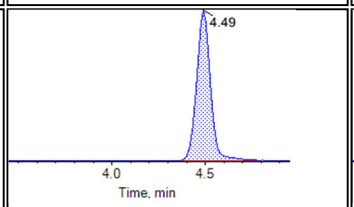
13C9-PFNA



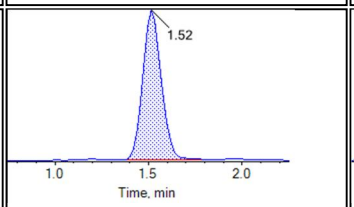
13C6-PFDA



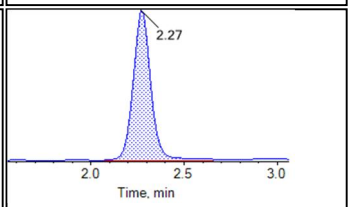
13C7-PFUnA



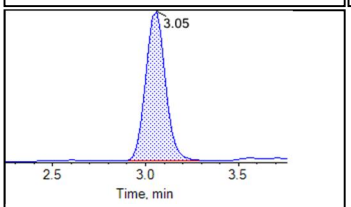
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

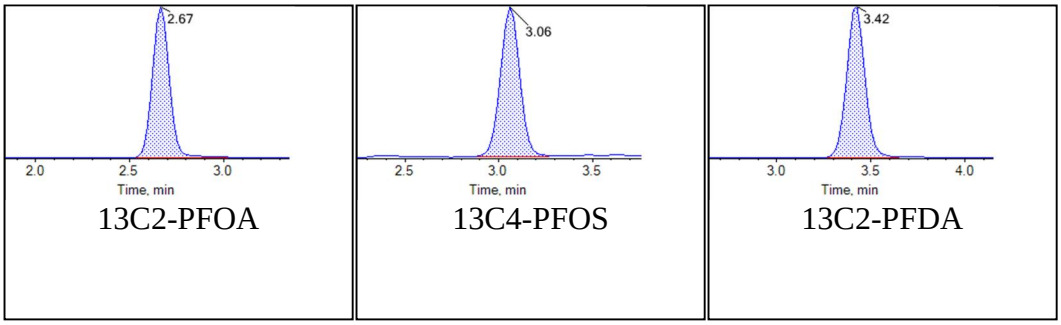


13C8-PFOS

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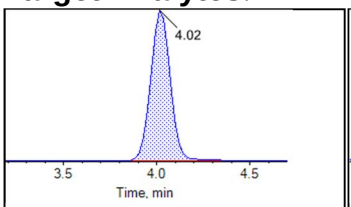
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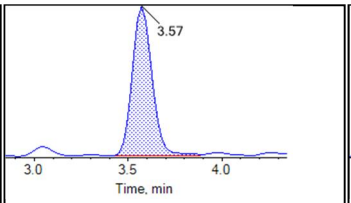
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Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:13:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

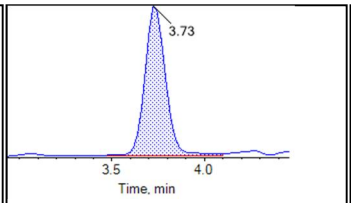
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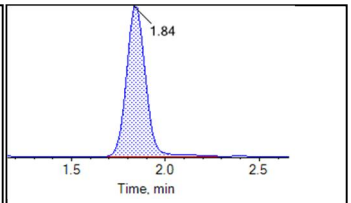
13C2-PFDoA



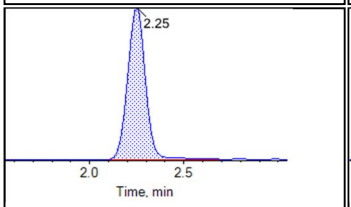
d3-MeFOSAA



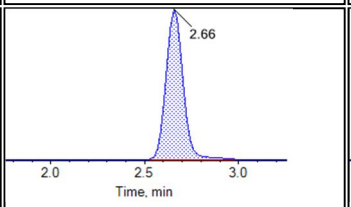
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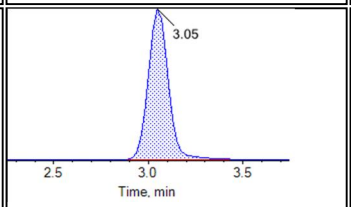
13C5-PFHxA



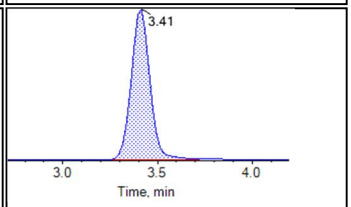
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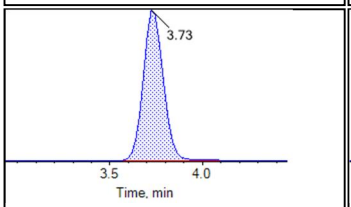
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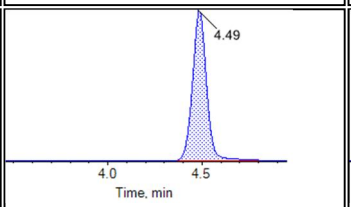
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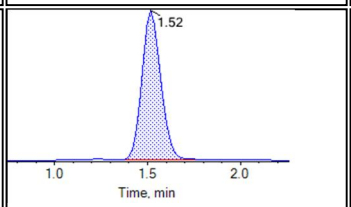
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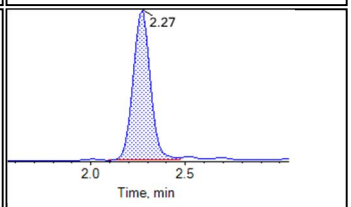
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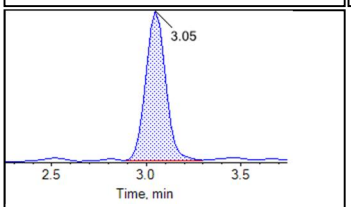
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



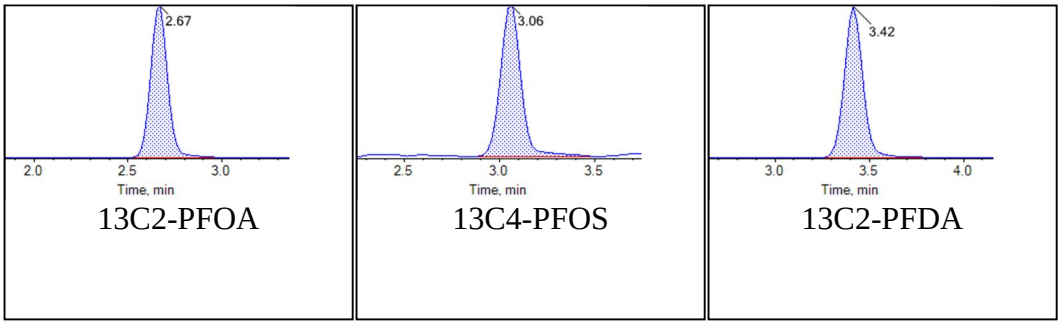
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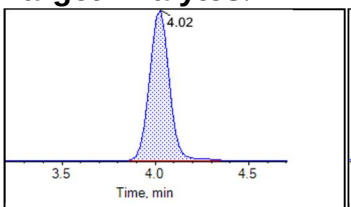
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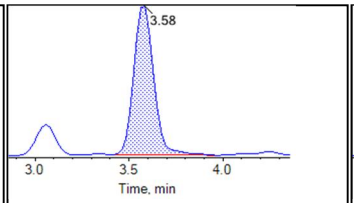
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Sample ID	VC-HS09-SB03-0506-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:34:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

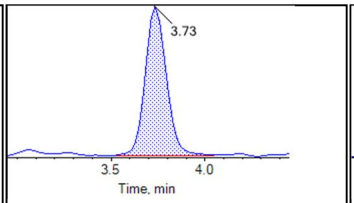
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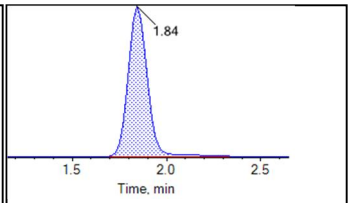
13C2-PFDoA



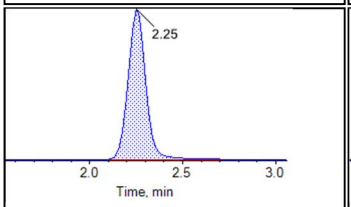
d3-MeFOSAA



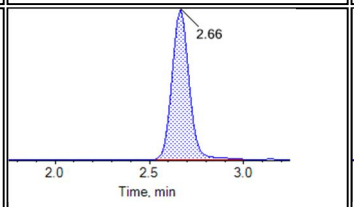
d5-EtFOSAA



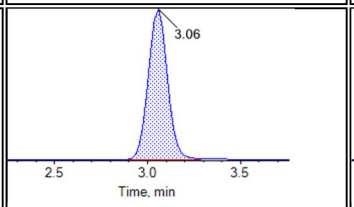
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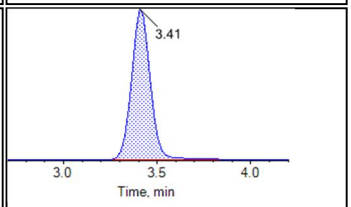
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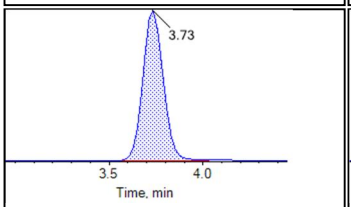
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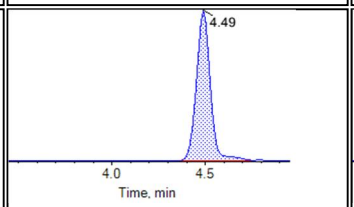
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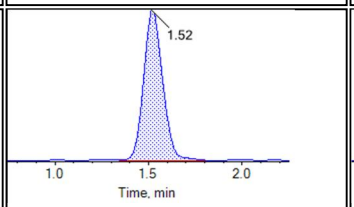
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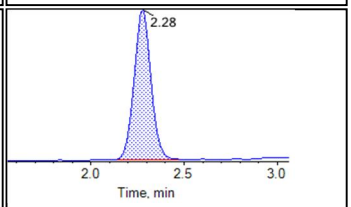
13C7-PFUnA



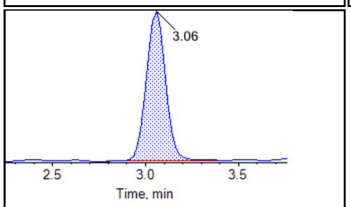
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



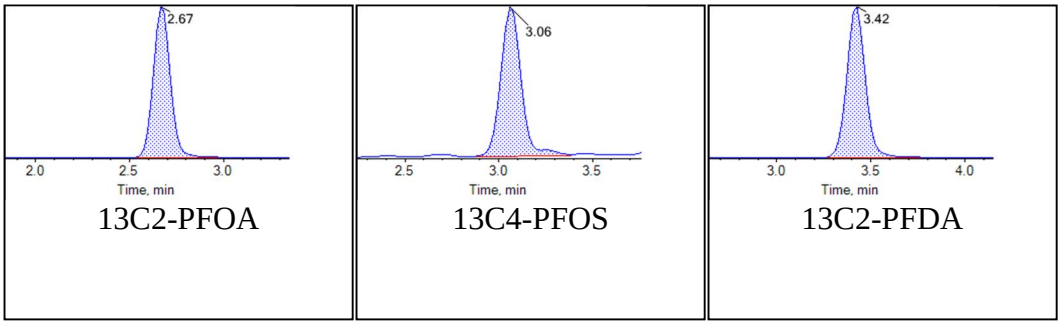
13C8-PFOS

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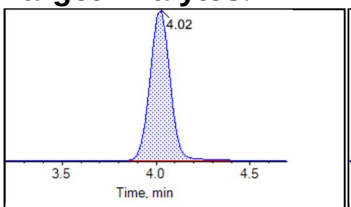
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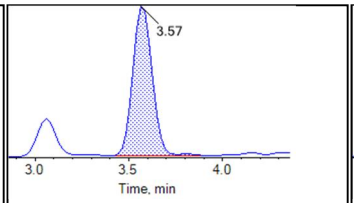
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Sample ID	VC-HS09-SB03-0506-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:45:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

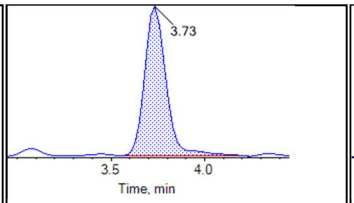
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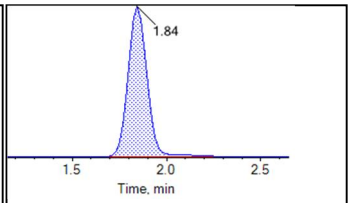
13C2-PFDoA



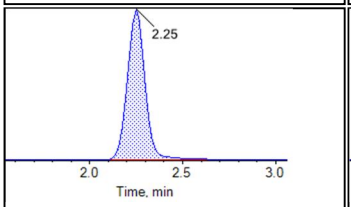
d3-MeFOSAA



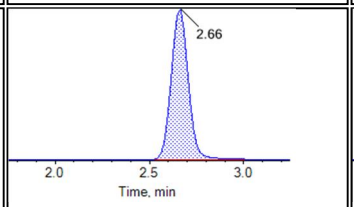
d5-EtFOSAA



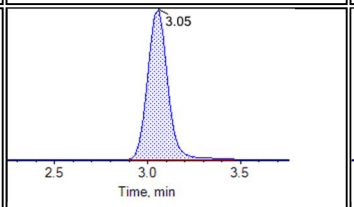
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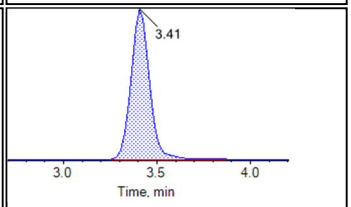
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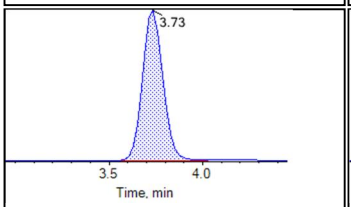
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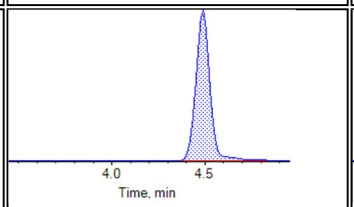
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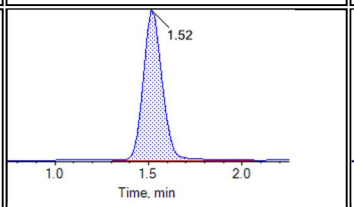
13C6-PFDA



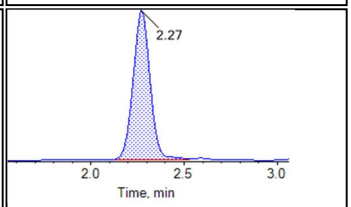
13C7-PFUnA



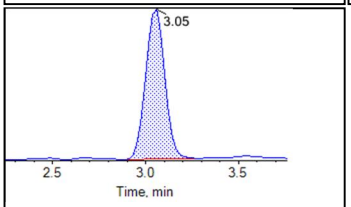
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



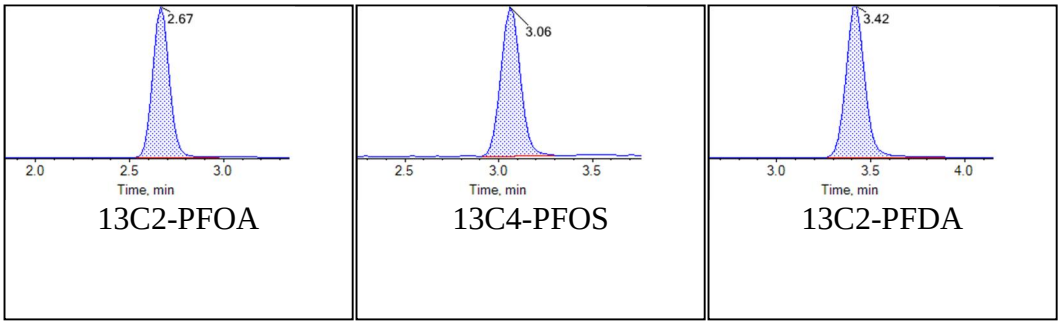
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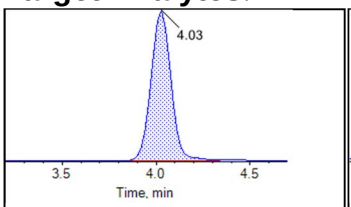
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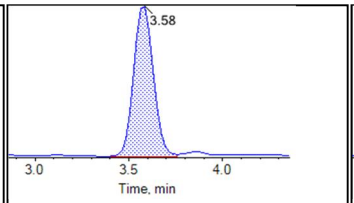
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Sample ID	VC-HS09-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T16:56:30	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

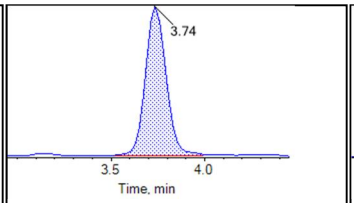
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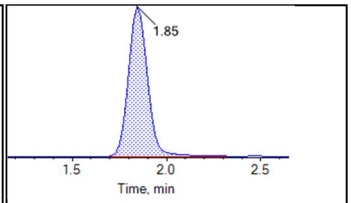
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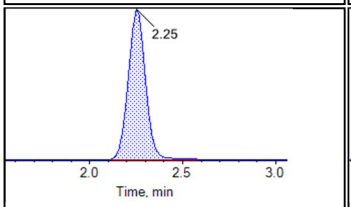
d3-MeFOSAA



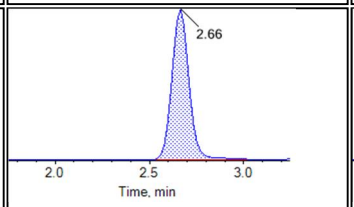
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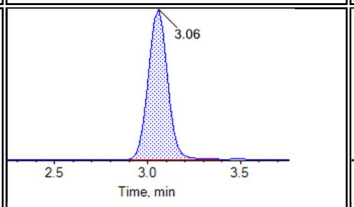
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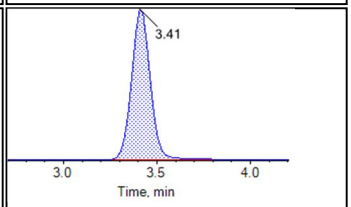
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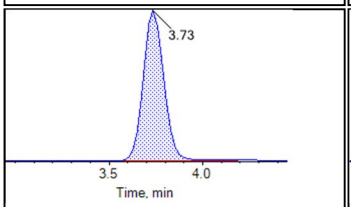
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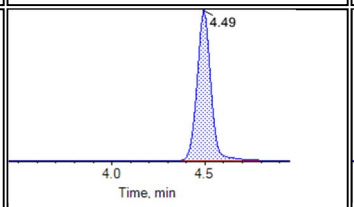
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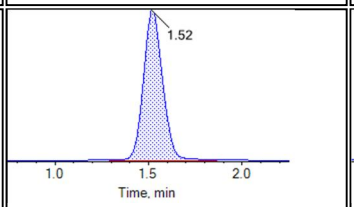
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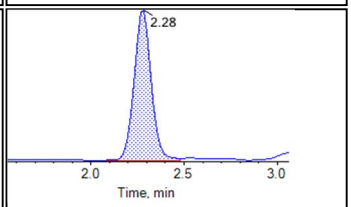
13C7-PFUnA



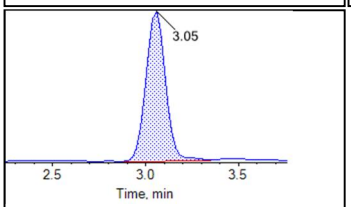
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



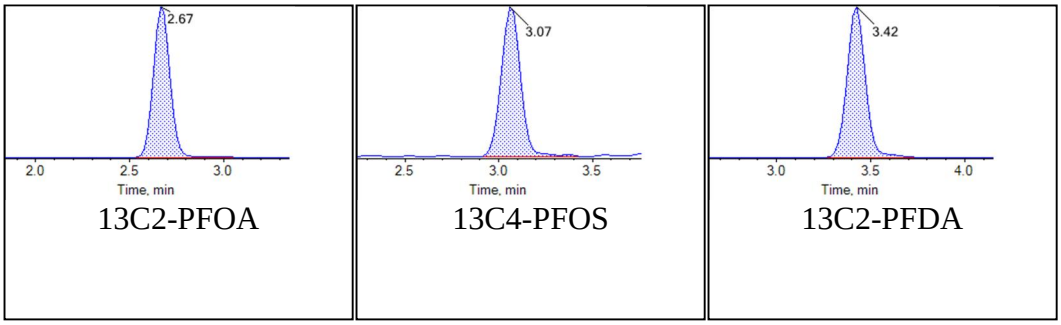
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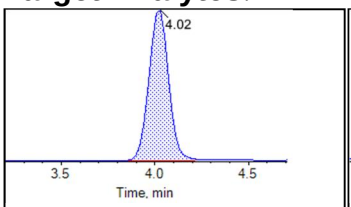
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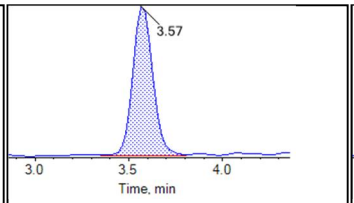
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Sample ID	VC-HS09-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:07:22	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

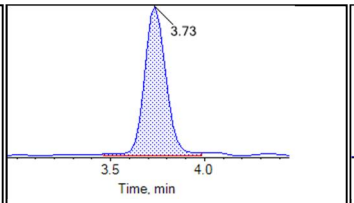
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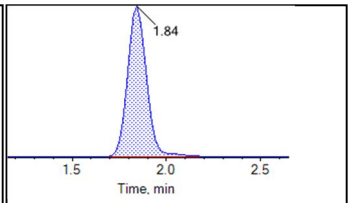
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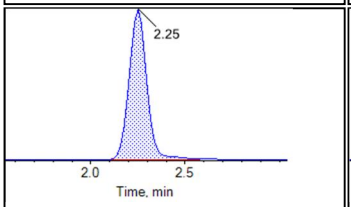
d3-MeFOSAA



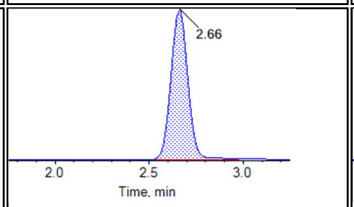
d5-EtFOSAA



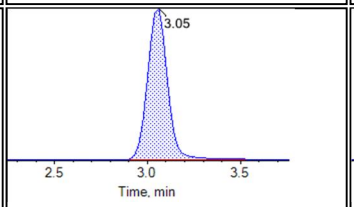
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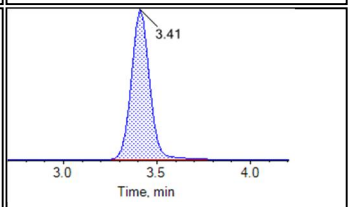
13C4-PFHpA



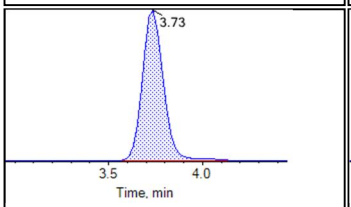
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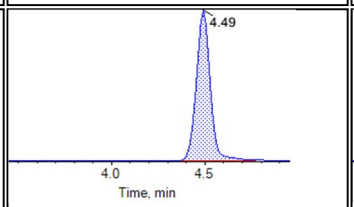
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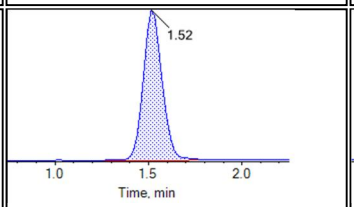
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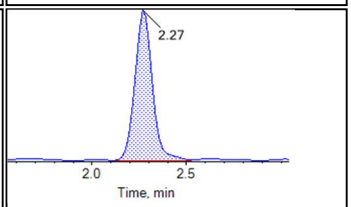
13C7-PFUnA



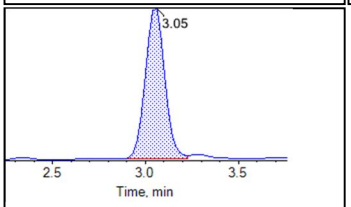
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

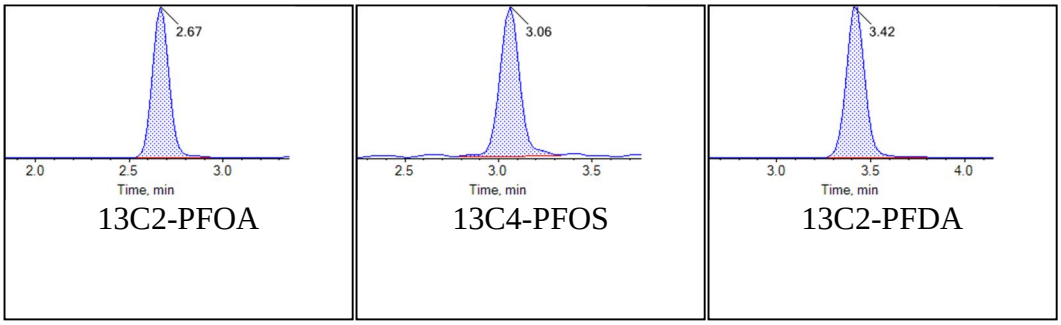


13C8-PFOS

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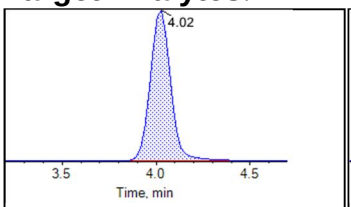
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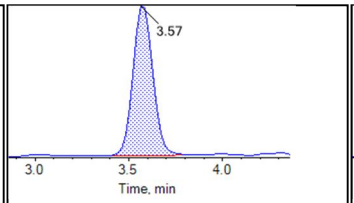
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Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:18:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

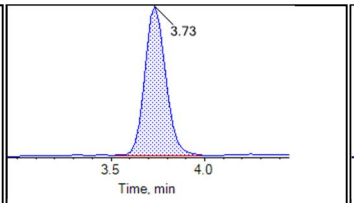
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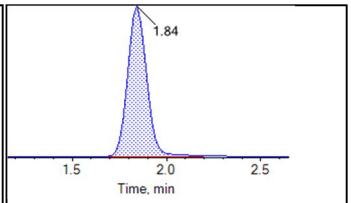
13C2-PFDoA



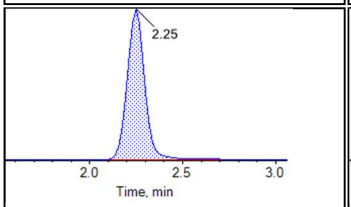
d3-MeFOSAA



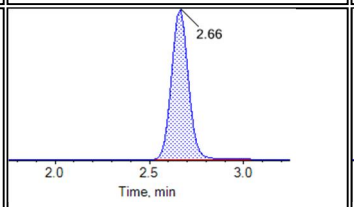
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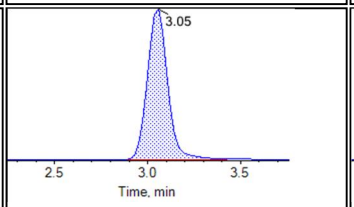
13C5-PFHxA



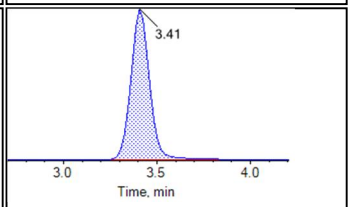
13C4-PFHpA



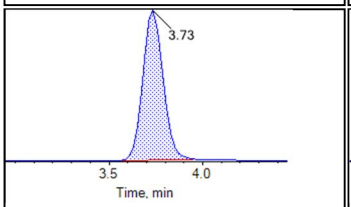
13C8-PFOA



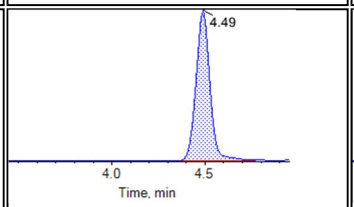
13C9-PFNA



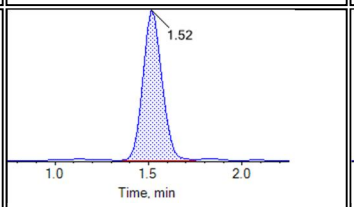
13C6-PFDA



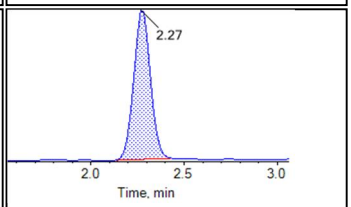
13C7-PFUnA



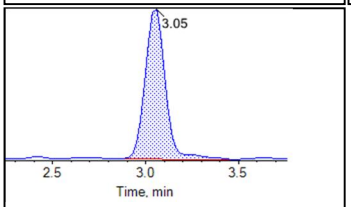
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

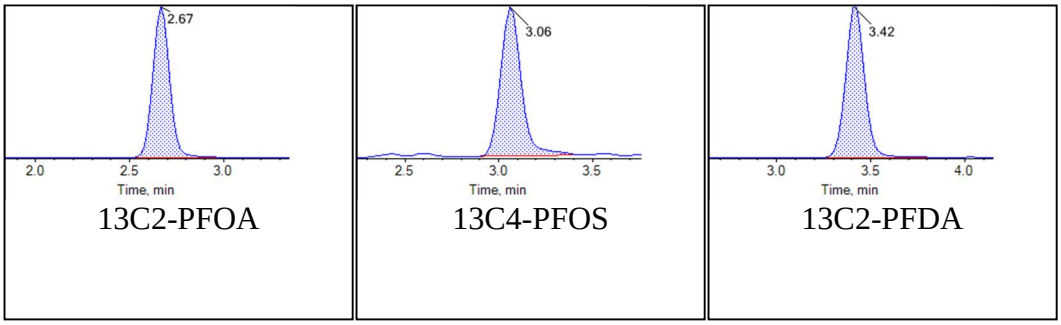


13C8-PFOS

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Internal Standards:



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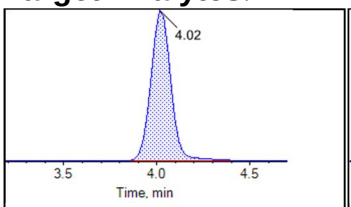
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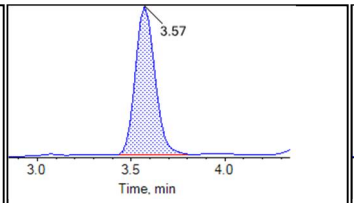
Sample Name	J8403-FS-D(5)	**Injection Vial**	42
Sample ID	VC-AOC16-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:29:05	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

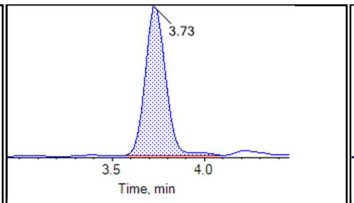
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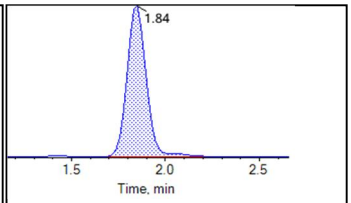
13C2-PFDoA



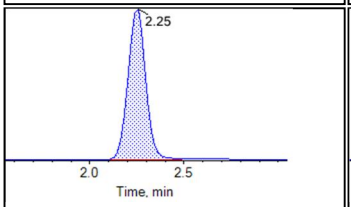
d3-MeFOSAA



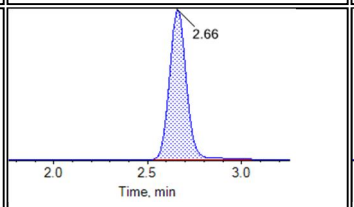
d5-EtFOSAA



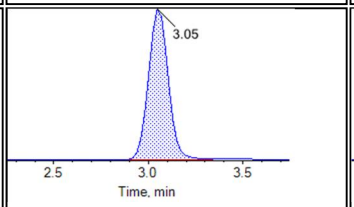
13C5-PFHxA



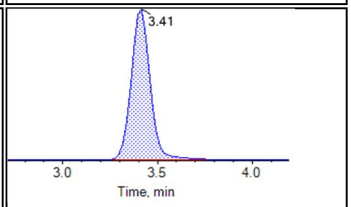
13C4-PFHpA



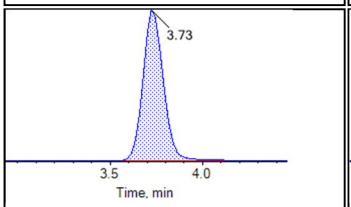
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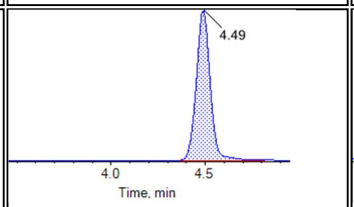
13C9-PFNA



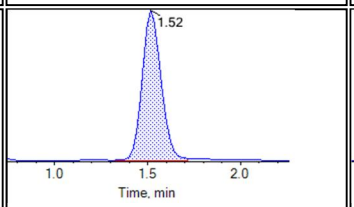
13C6-PFDA



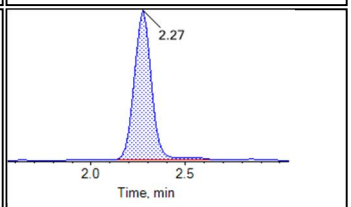
13C7-PFUnA



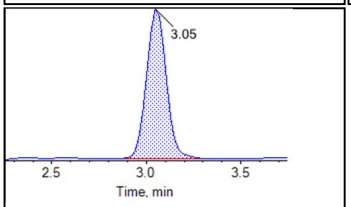
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

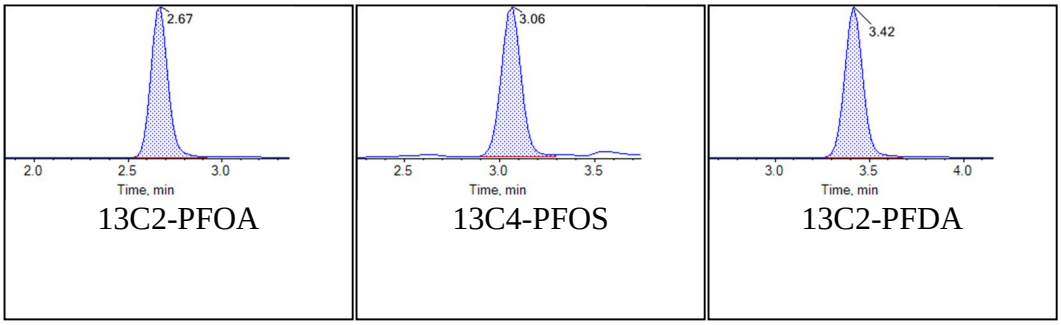


13C8-PFOS

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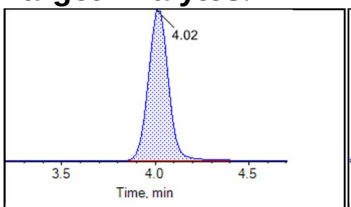
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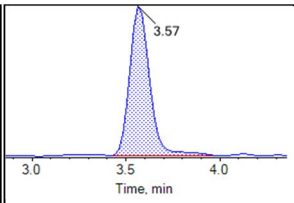
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Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:39:57	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

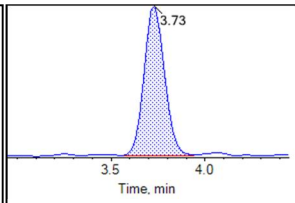
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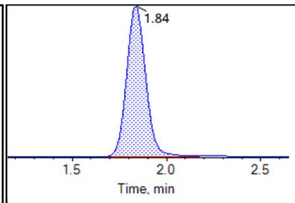
13C2-PFDoA



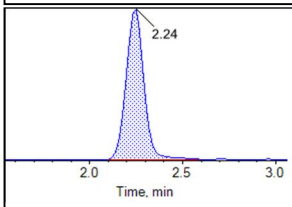
d3-MeFOSAA



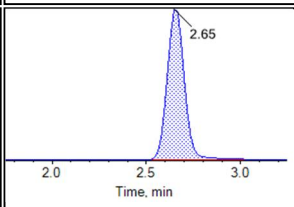
d5-EtFOSAA



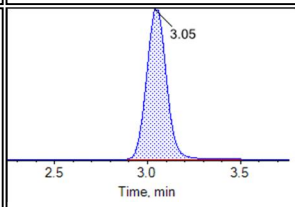
13C5-PFHxA



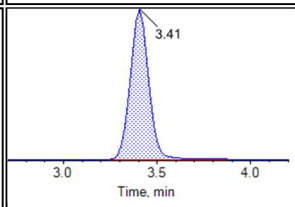
13C4-PFHpA



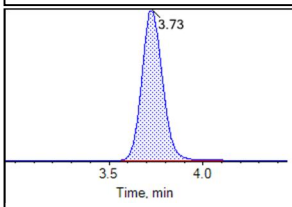
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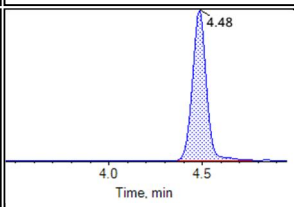
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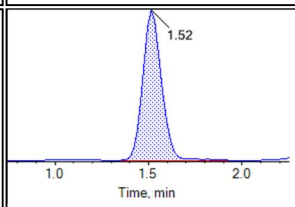
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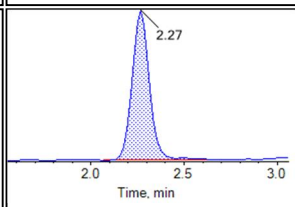
13C7-PFUnA



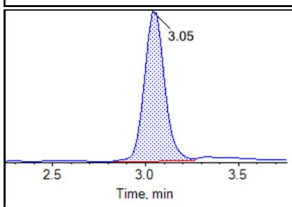
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



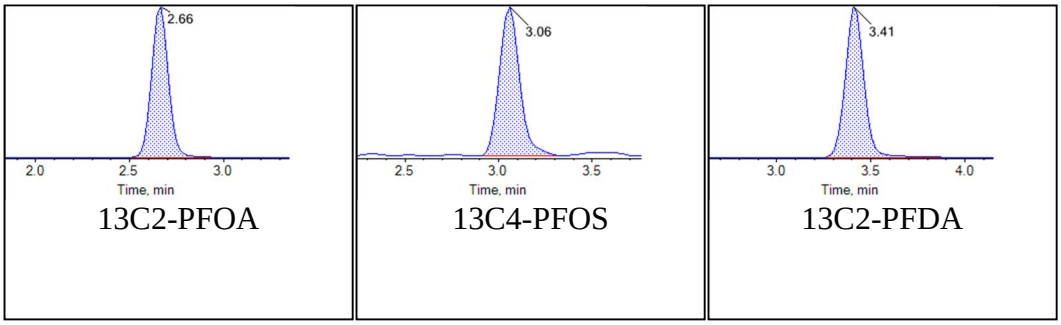
13C8-PFOS

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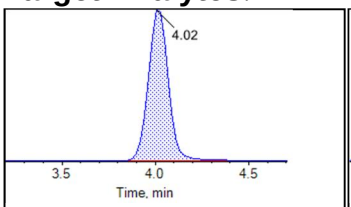
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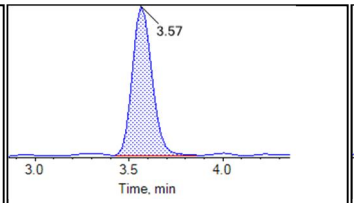
Sample Name	J8404-FS-D(5)	**Injection Vial**	44
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T17:50:48	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

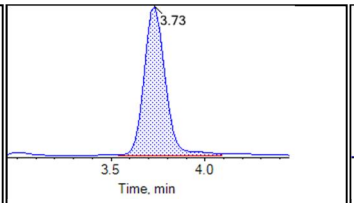
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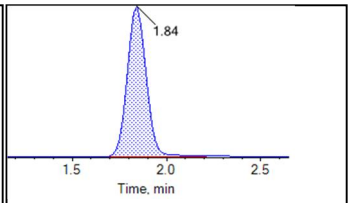
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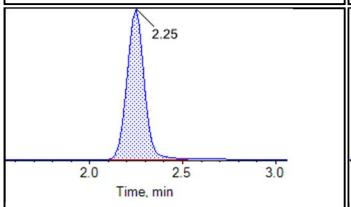
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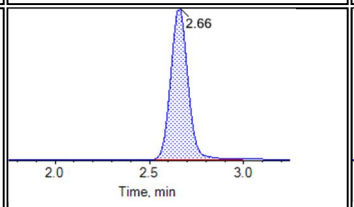
d5-EtFOSAA



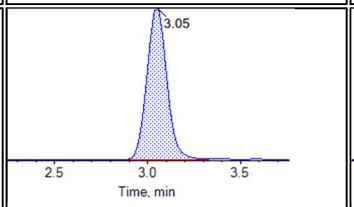
13C5-PFHxA



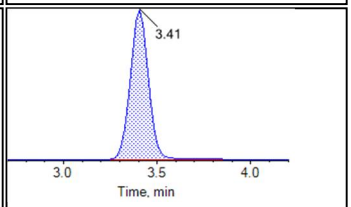
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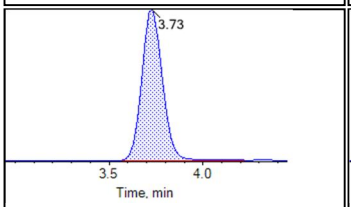
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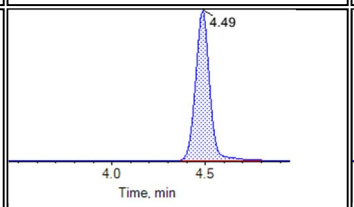
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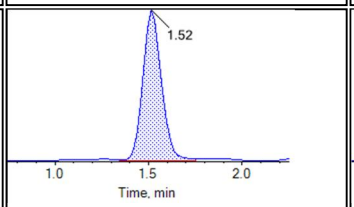
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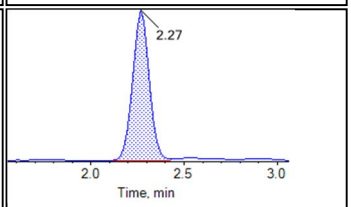
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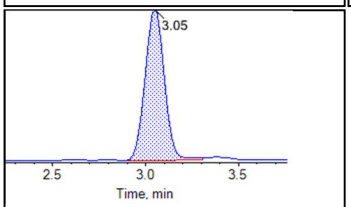
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



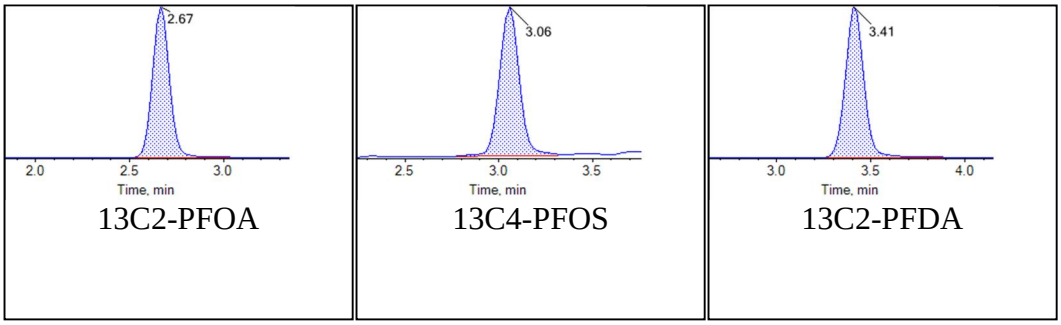
13C8-PFOS

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Chromatogram Report

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Internal Standards:



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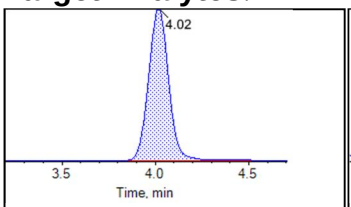
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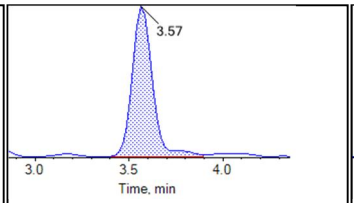
Sample Name	J8404-FS-D(7)	**Injection Vial**	45
Sample ID	VC-AOC16-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:01:40	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

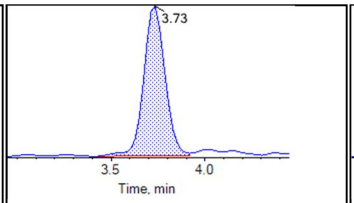
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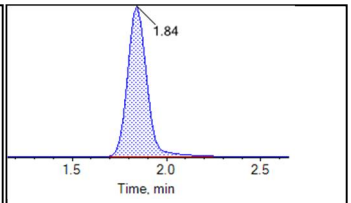
13C2-PFDoA



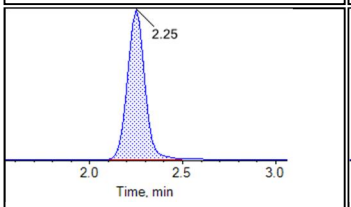
d3-MeFOSAA



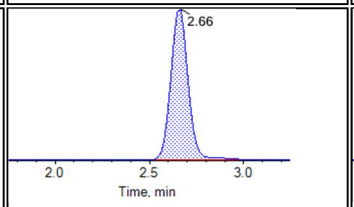
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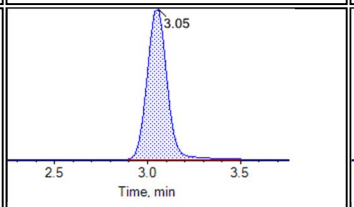
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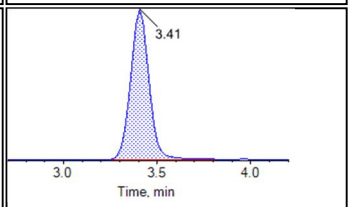
13C4-PFHpA



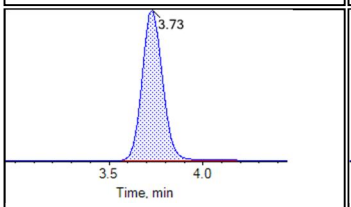
13C8-PFOA



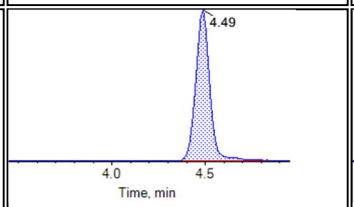
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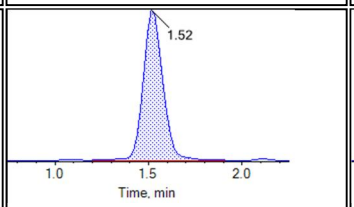
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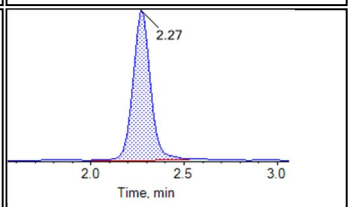
13C7-PFUnA



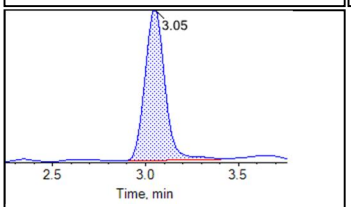
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



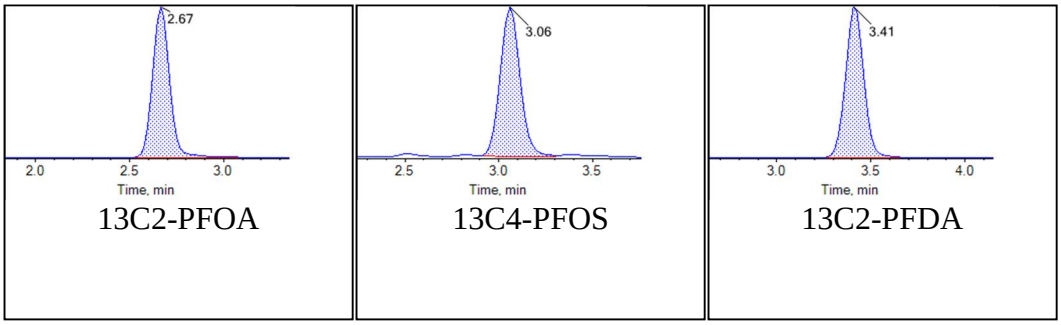
13C8-PFOS

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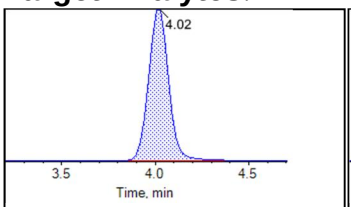
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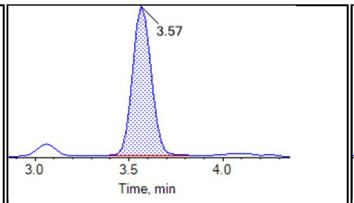
Sample Name	KB77 CCV	**Injection Vial**	46
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:12:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

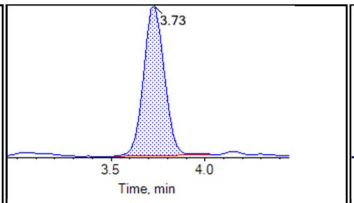
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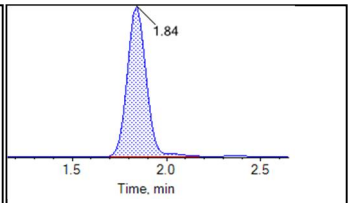
13C2-PFDoA



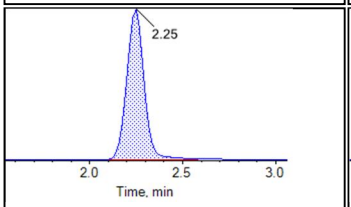
d3-MeFOSAA



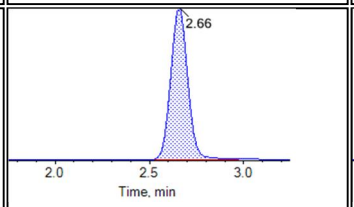
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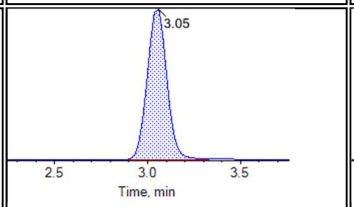
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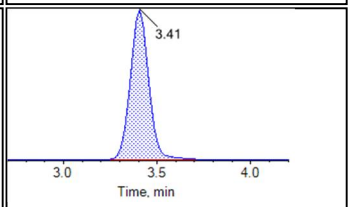
13C4-PFHpA



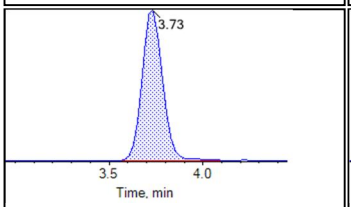
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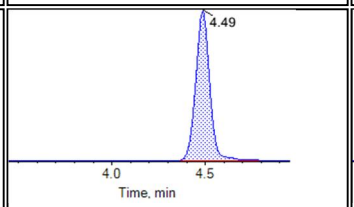
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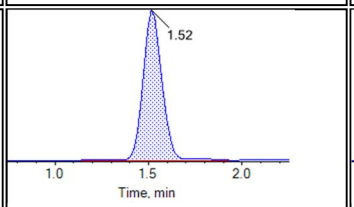
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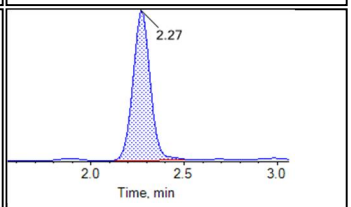
13C7-PFUnA



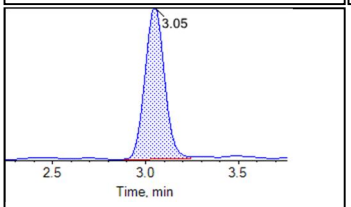
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

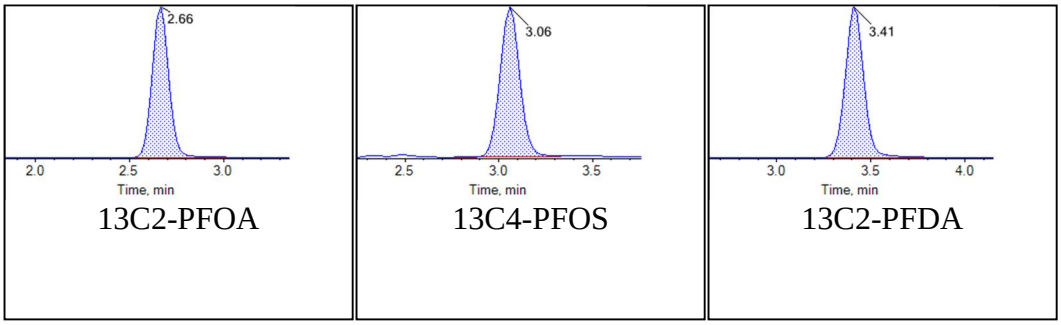


13C8-PFOS

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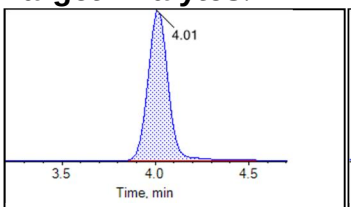
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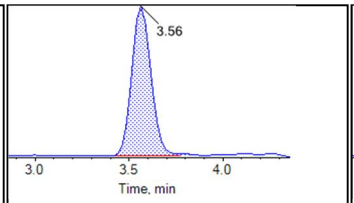
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Sample ID	VC-AOC16-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:34:14	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

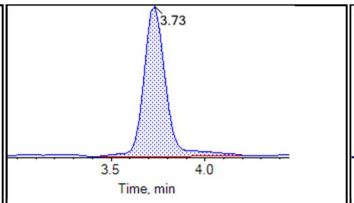
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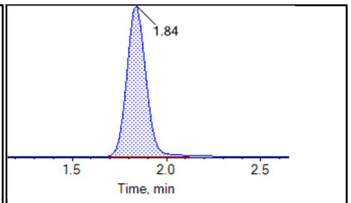
13C2-PFDoA



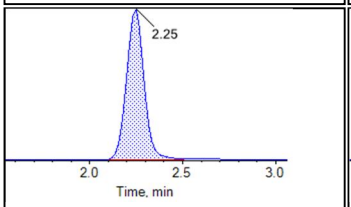
d3-MeFOSAA



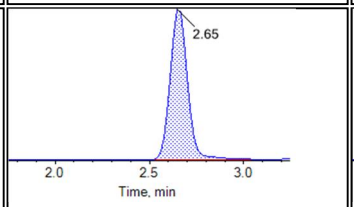
d5-EtFOSAA



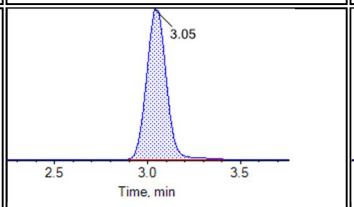
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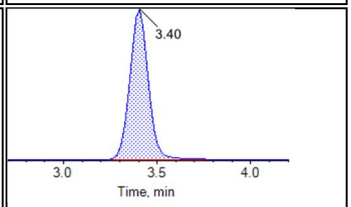
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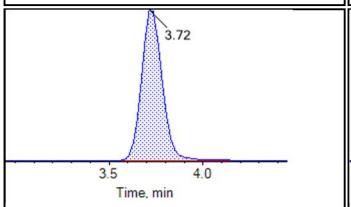
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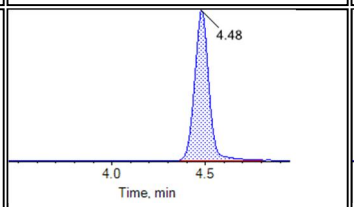
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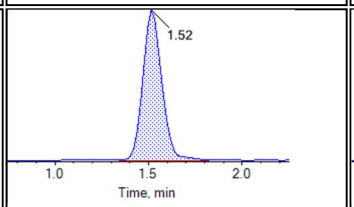
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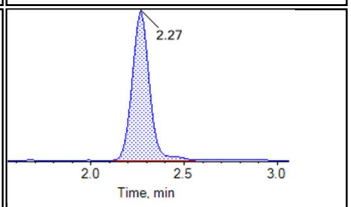
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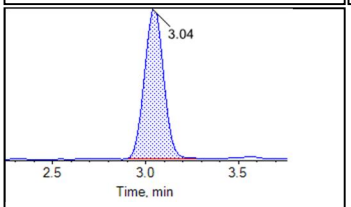
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



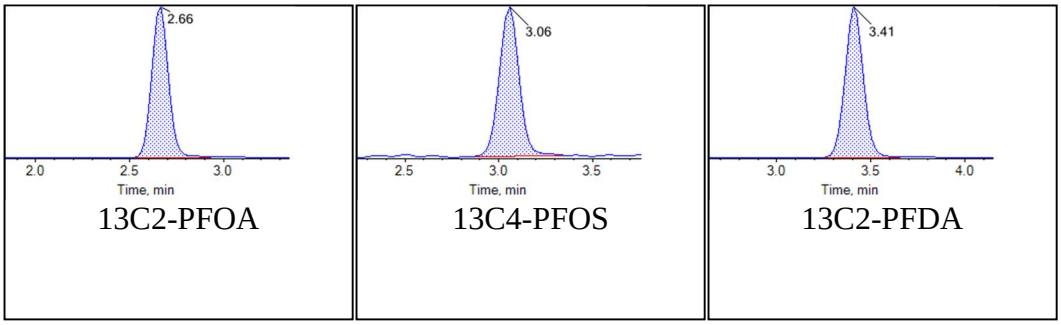
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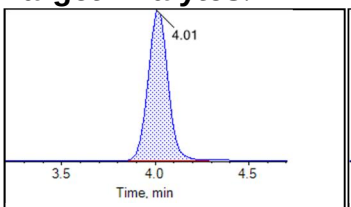
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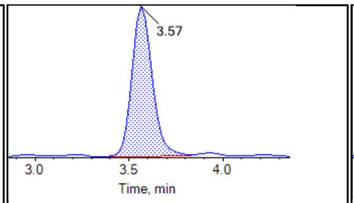
Sample Name	J8406-FS(3)	**Injection Vial**	49
Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:45:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

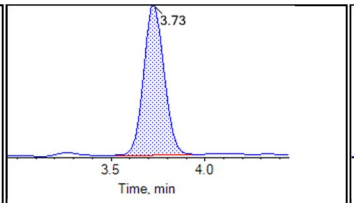
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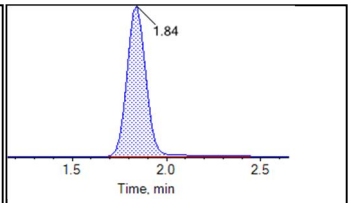
13C2-PFDoA



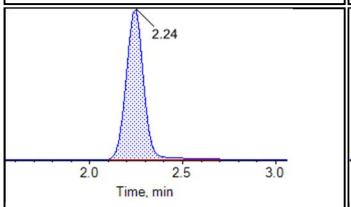
d3-MeFOSAA



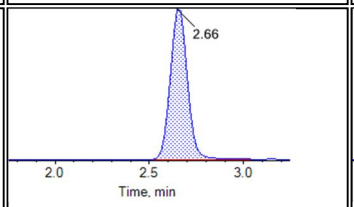
d5-EtFOSAA



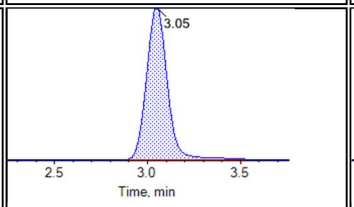
13C5-PFHxA



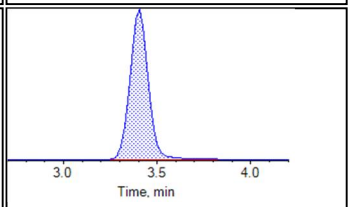
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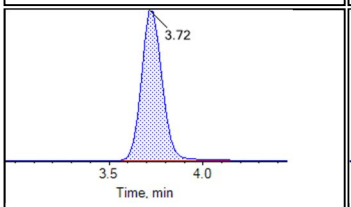
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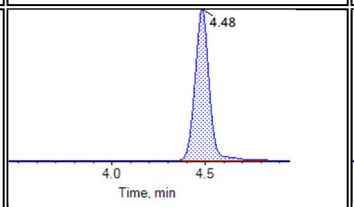
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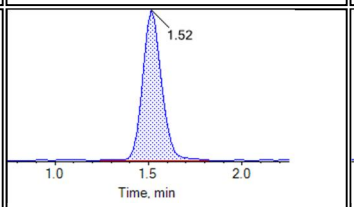
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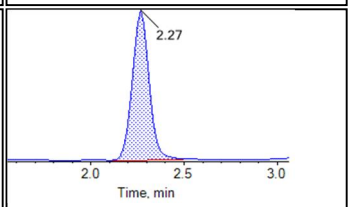
13C7-PFUnA



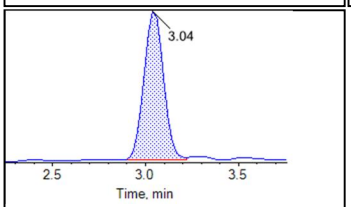
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

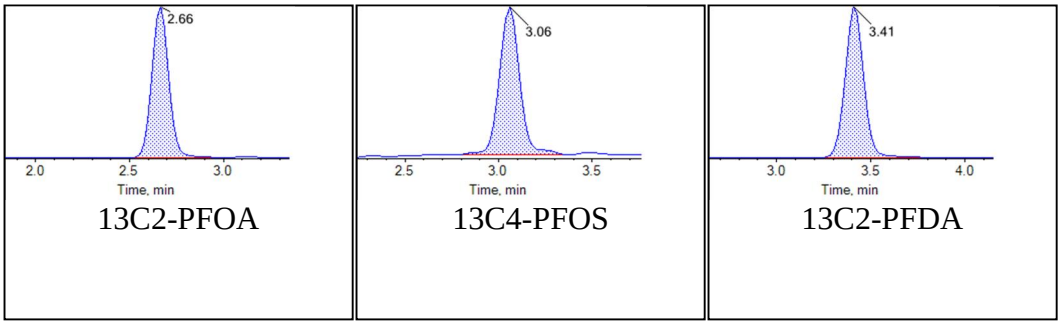


13C8-PFOS

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Internal Standards:



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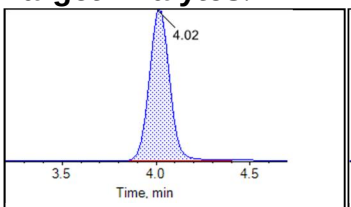
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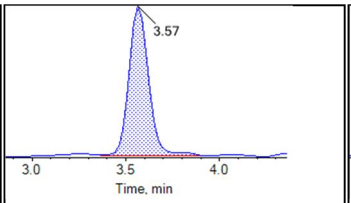
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Sample ID	VC-AOC16-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T18:55:58	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

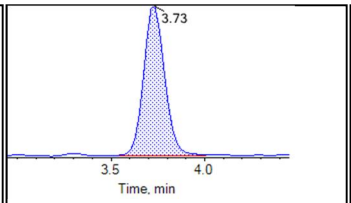
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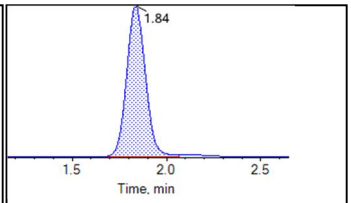
13C2-PFDoA



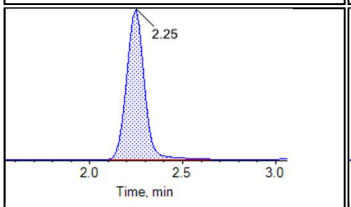
d3-MeFOSAA



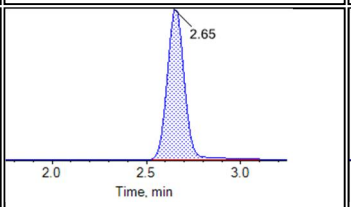
d5-EtFOSAA



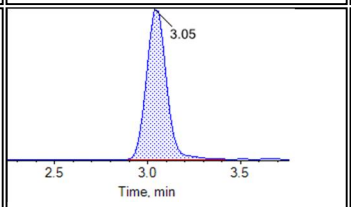
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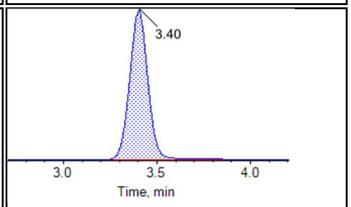
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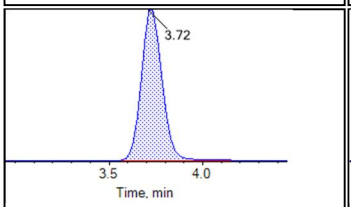
13C8-PFOA



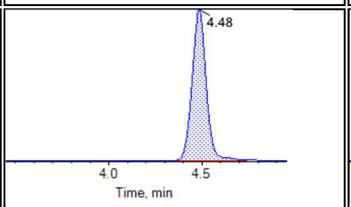
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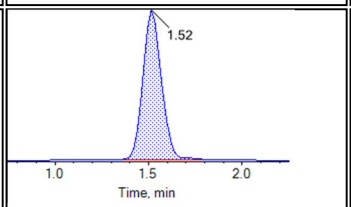
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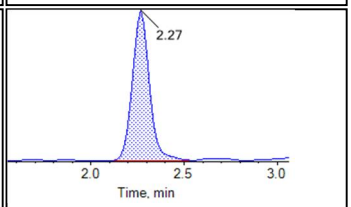
13C7-PFUnA



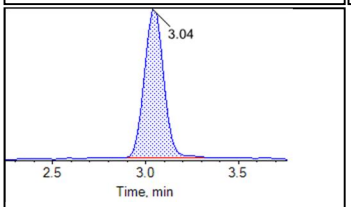
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

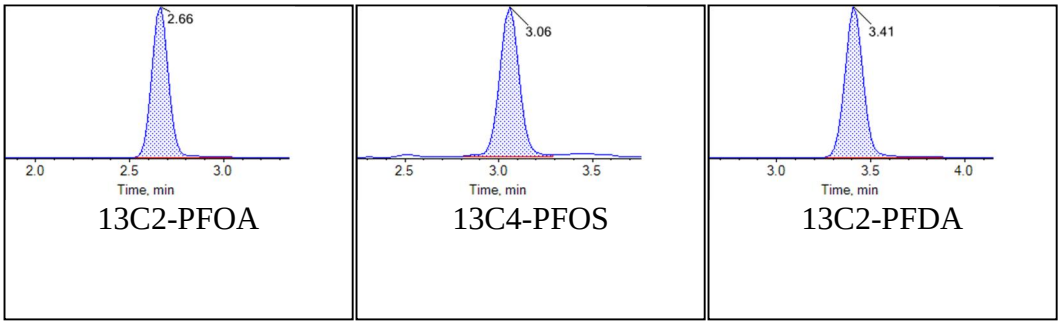


13C8-PFOS

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Internal Standards:



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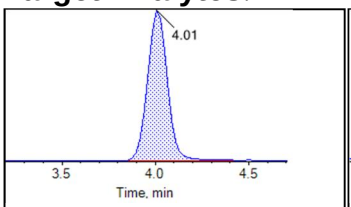
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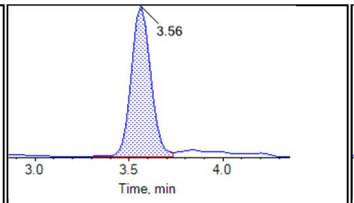
Sample Name	J8407-FS(3)	**Injection Vial**	51
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:06:50	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

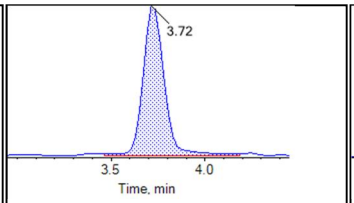
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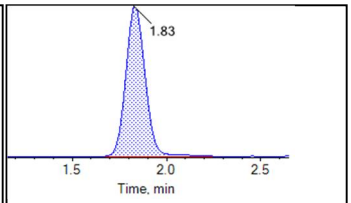
13C2-PFDoA



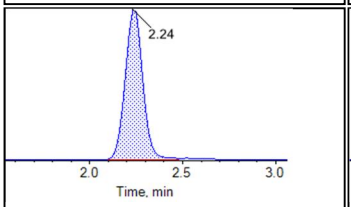
d3-MeFOSAA



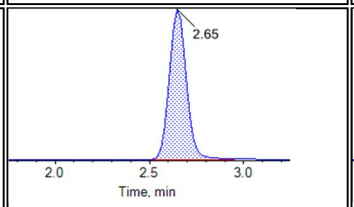
d5-EtFOSAA



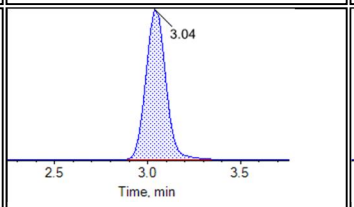
13C5-PFHxA



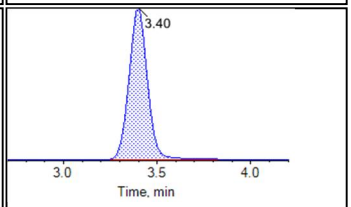
13C4-PFHpA



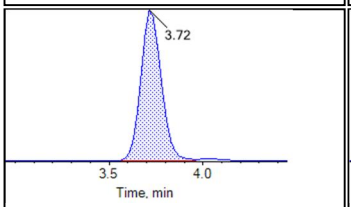
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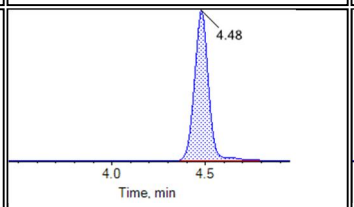
13C9-PFNA



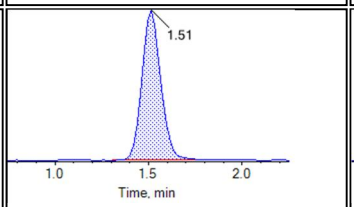
13C6-PFDA



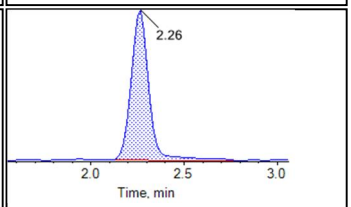
13C7-PFUnA



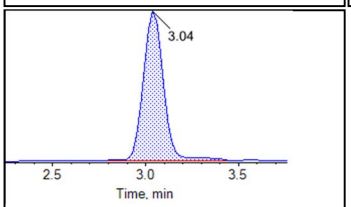
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



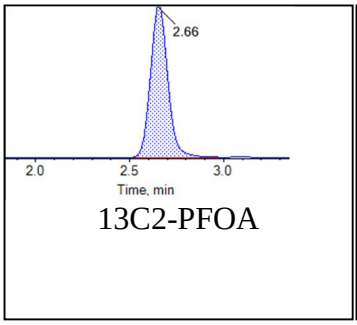
13C8-PFOS

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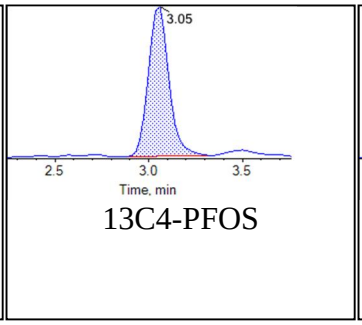
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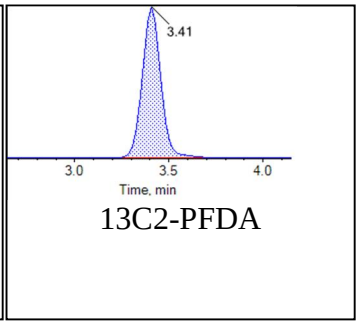
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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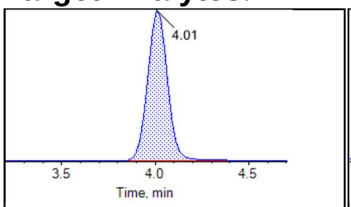
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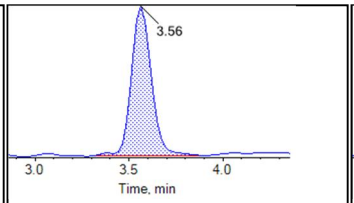
Sample Name	J8407-FS-D(5)	**Injection Vial**	52
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:17:41	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

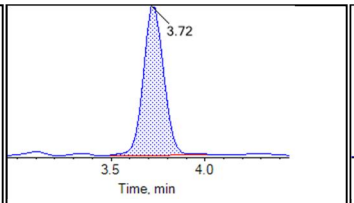
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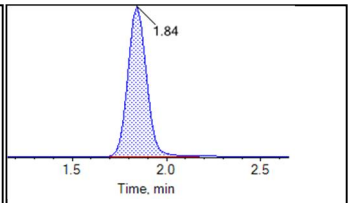
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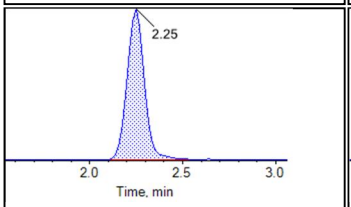
d3-MeFOSAA



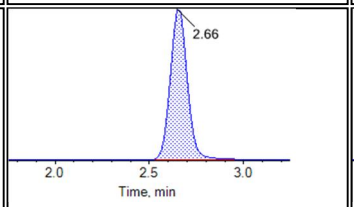
d5-EtFOSAA



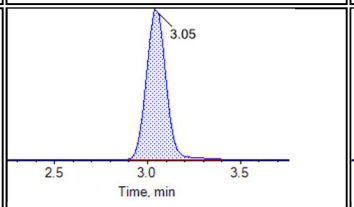
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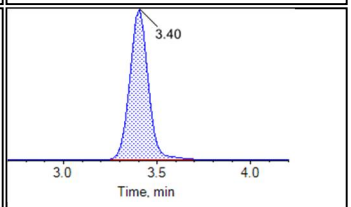
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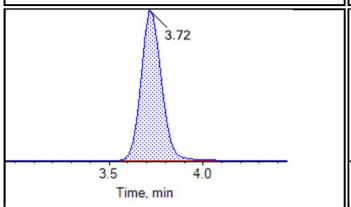
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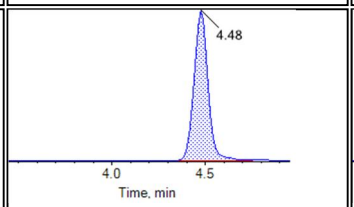
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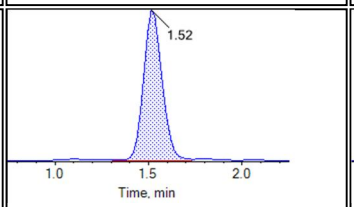
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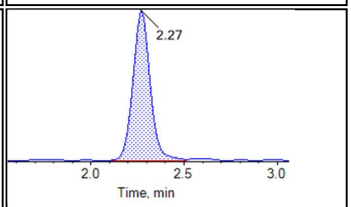
13C7-PFUnA



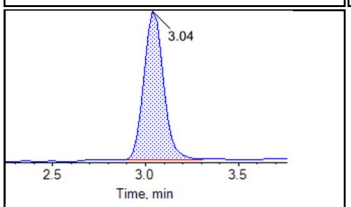
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13C3-PFBS



13C3-PFHxS



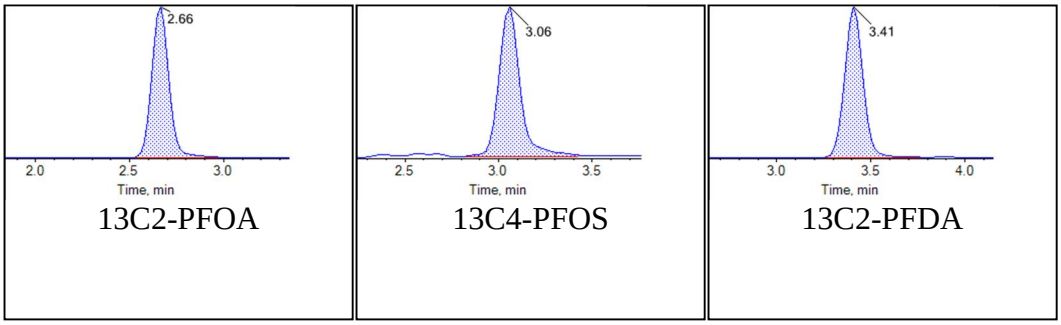
13C8-PFOS

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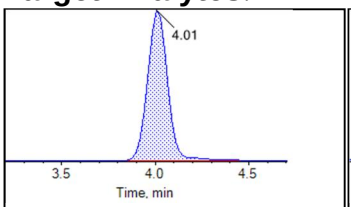
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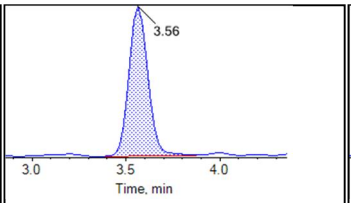
Sample Name	J8407-FS-D(7)	**Injection Vial**	53
Sample ID	VC-AOC16-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:28:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

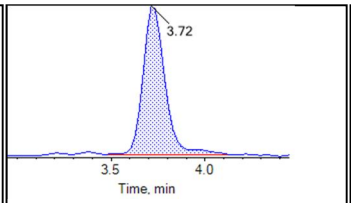
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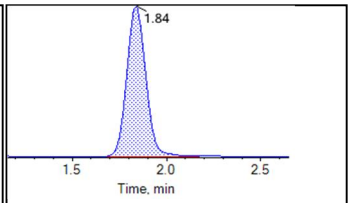
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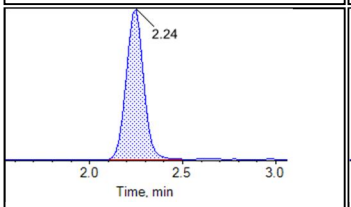
d3-MeFOSAA



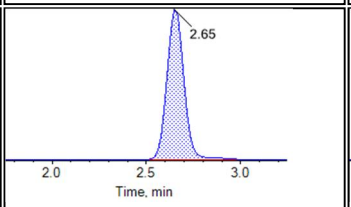
d5-EtFOSAA



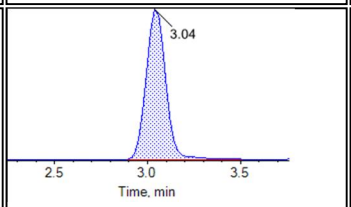
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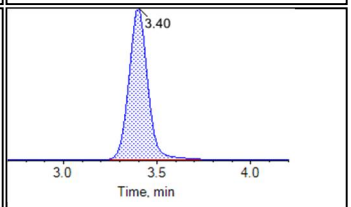
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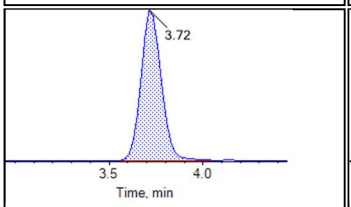
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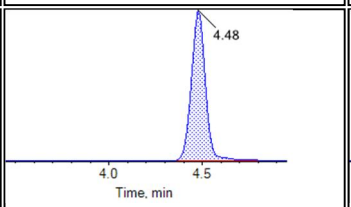
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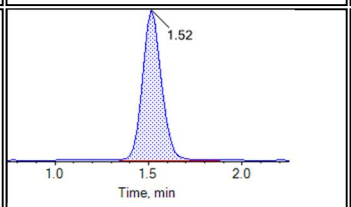
13C6-PFDA



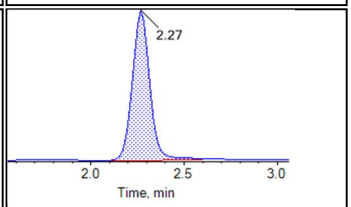
13C7-PFUnA



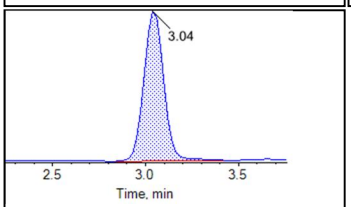
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

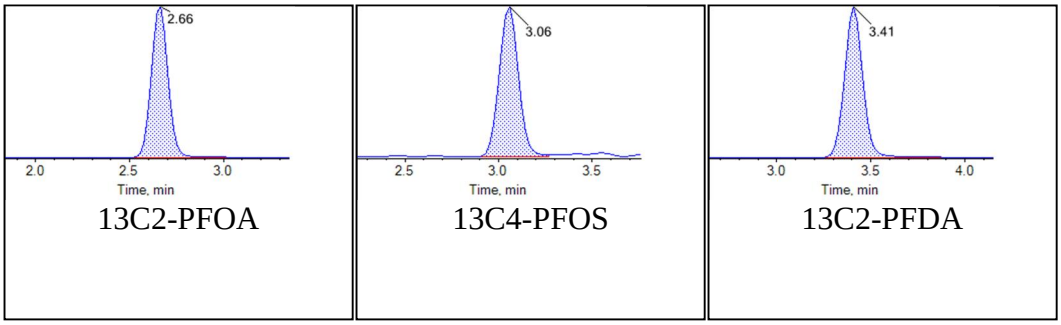


13C8-PFOS

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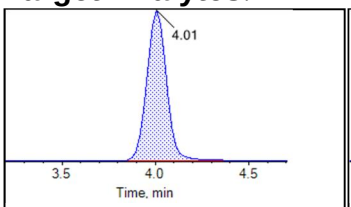
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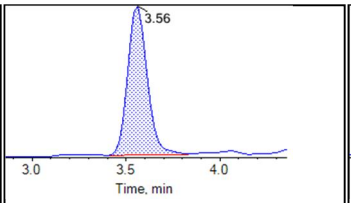
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Sample ID	VC-AOC16-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:39:22	**Data File**	18-0585_18-0583.wiff
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Sample Comment			

Chromatograms

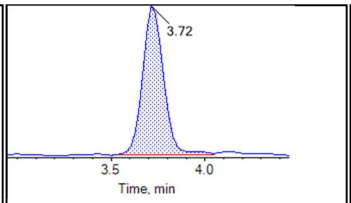
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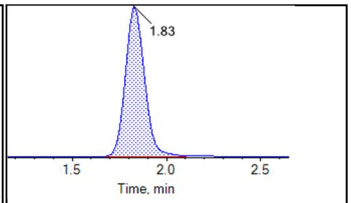
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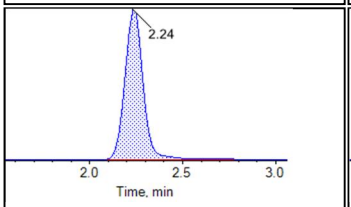
d3-MeFOSAA



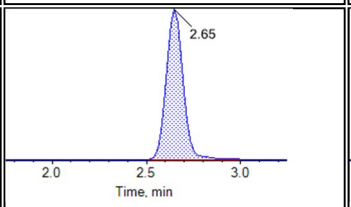
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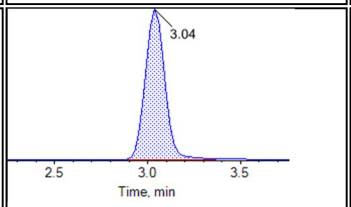
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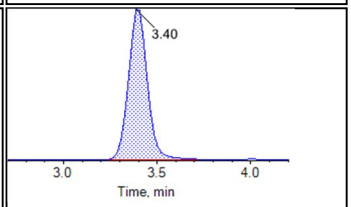
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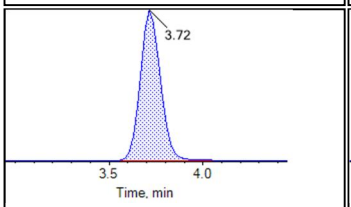
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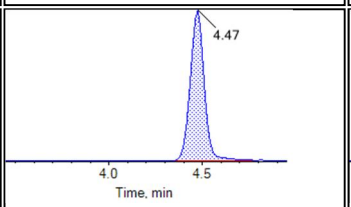
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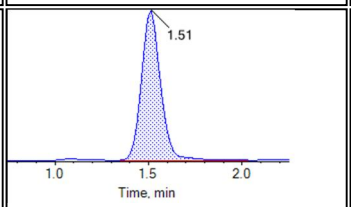
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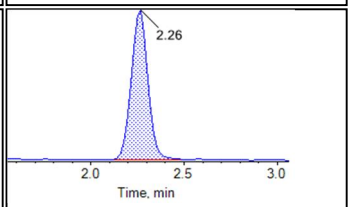
13C7-PFUnA



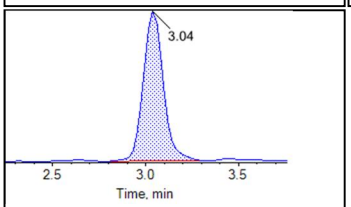
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



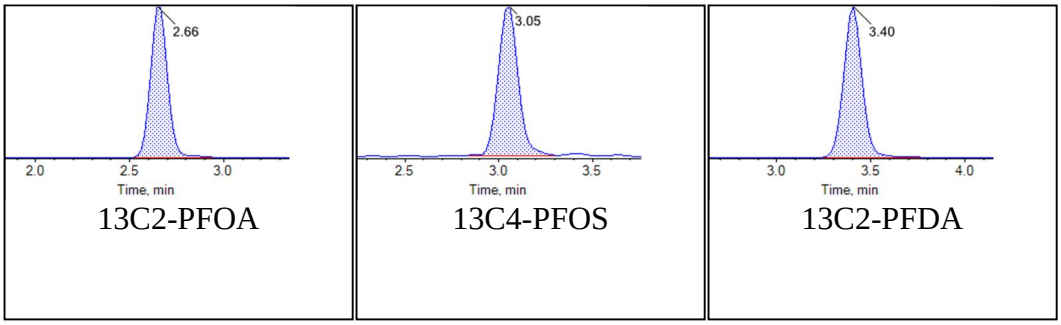
13C8-PFOS

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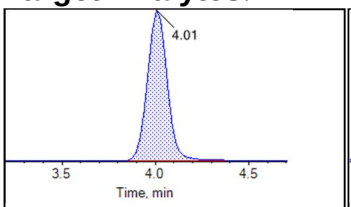
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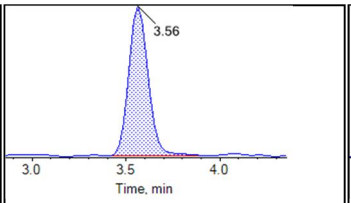
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Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T19:50:12	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

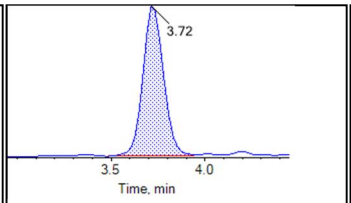
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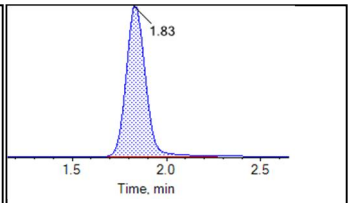
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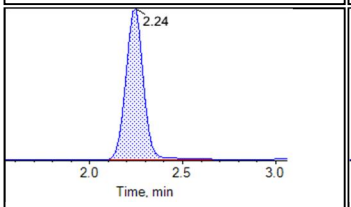
d3-MeFOSAA



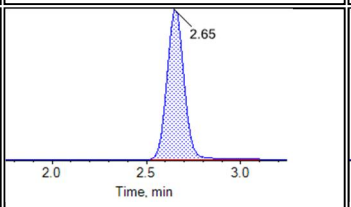
d5-EtFOSAA



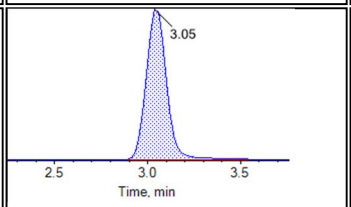
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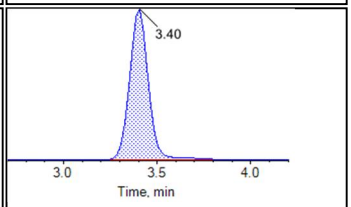
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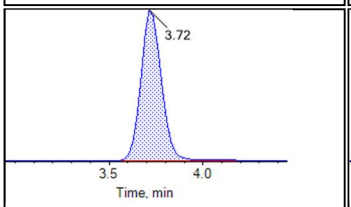
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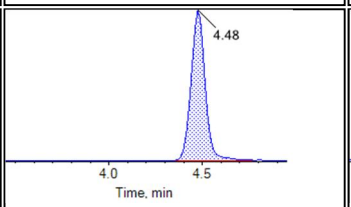
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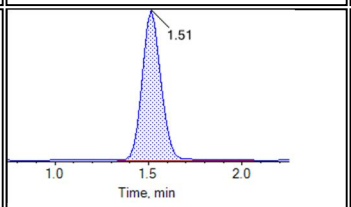
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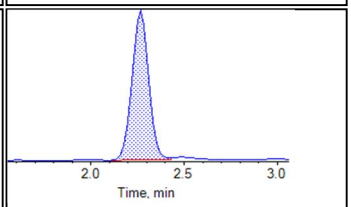
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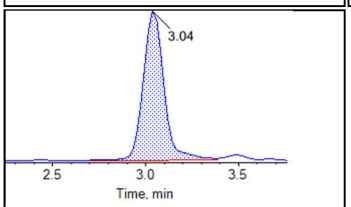
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



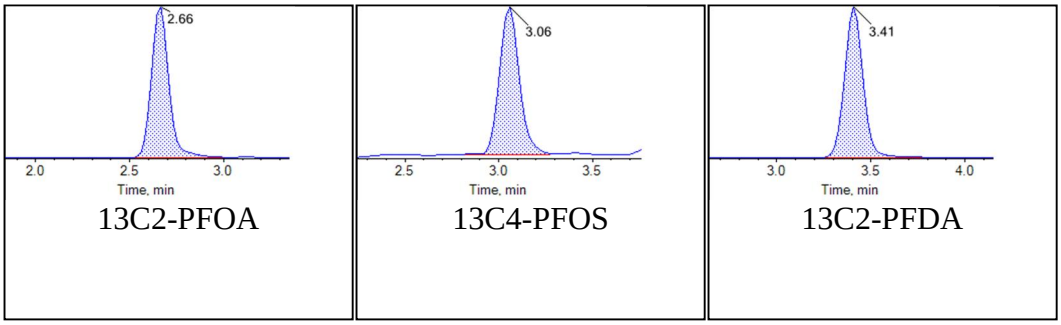
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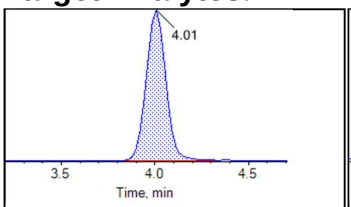
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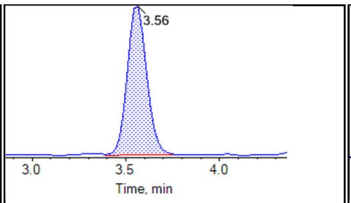
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Sample ID	VC-AOC16-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:01:06	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
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Chromatograms

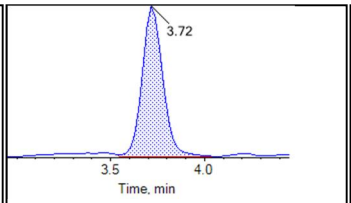
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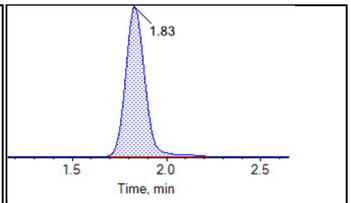
13C2-PFDoA



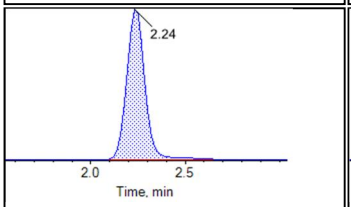
d3-MeFOSAA



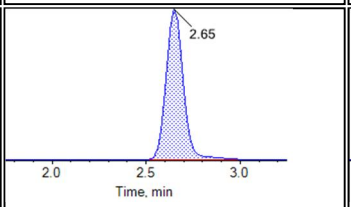
d5-EtFOSAA



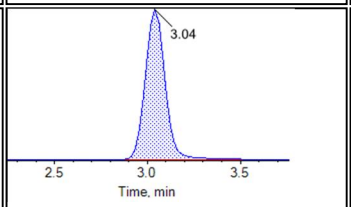
13C5-PFHxA



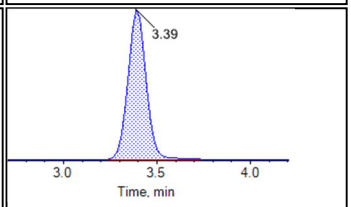
13C4-PFHpA



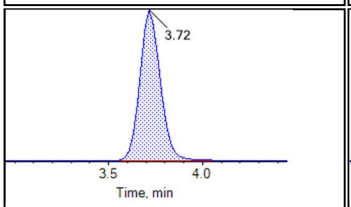
13C8-PFOA



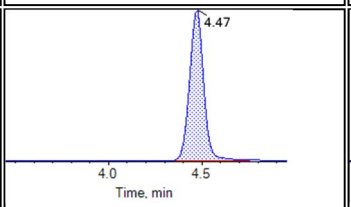
13C9-PFNA



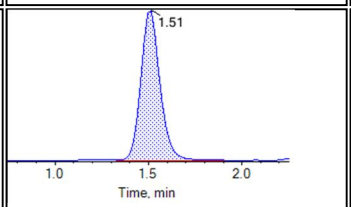
13C6-PFDA



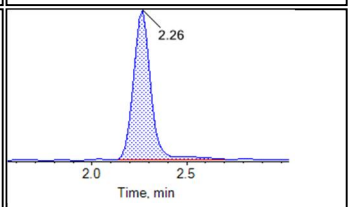
13C7-PFUnA



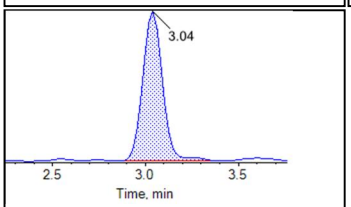
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



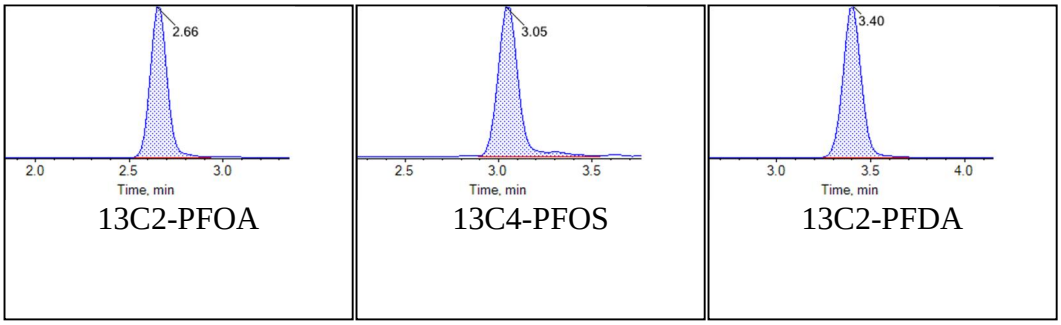
13C8-PFOS

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Internal Standards:



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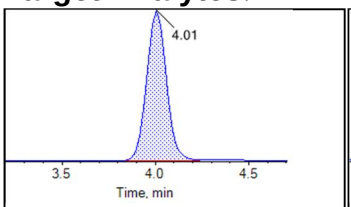
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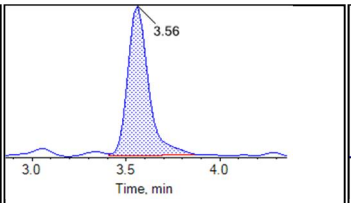
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Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:11:59	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

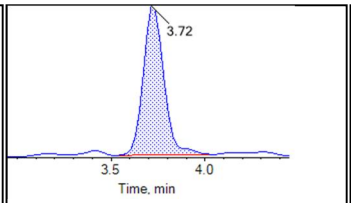
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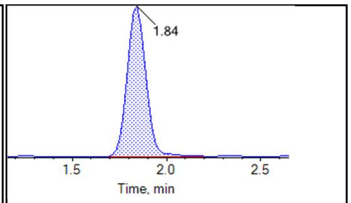
13C2-PFDoA



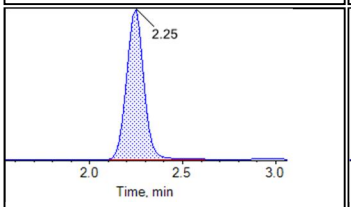
d3-MeFOSAA



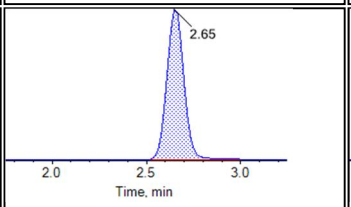
d5-EtFOSAA



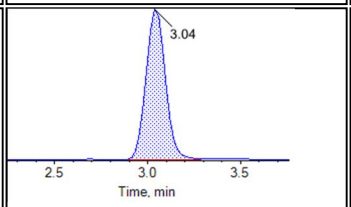
13C5-PFHxA



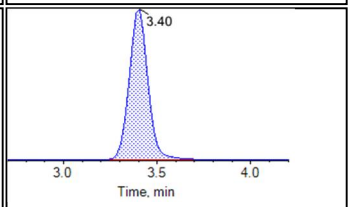
13C4-PFHpA



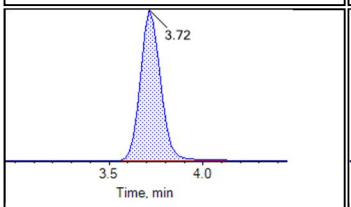
13C8-PFOA



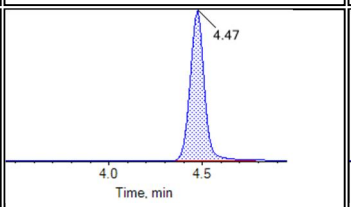
13C9-PFNA



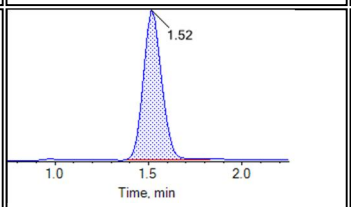
13C6-PFDA



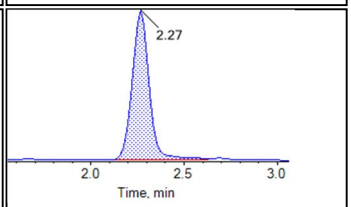
13C7-PFUnA



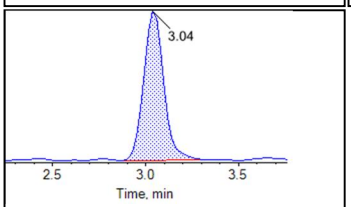
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



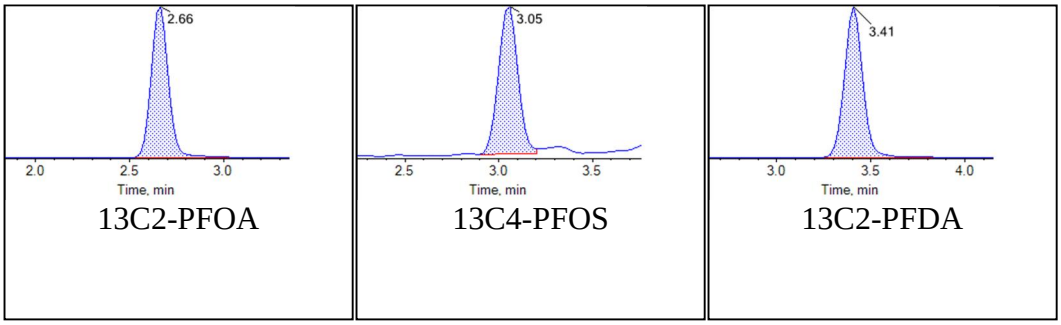
13C8-PFOS

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Internal Standards:



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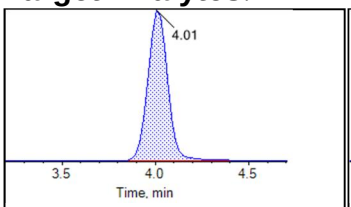
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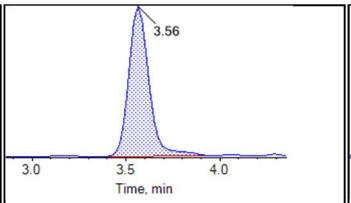
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Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:33:46	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

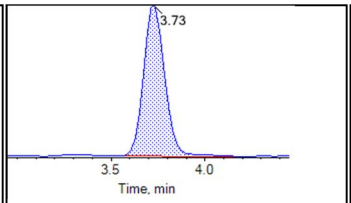
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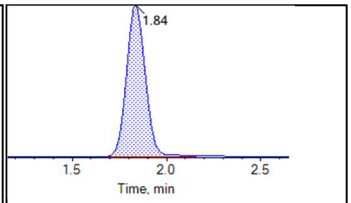
13C2-PFDoA



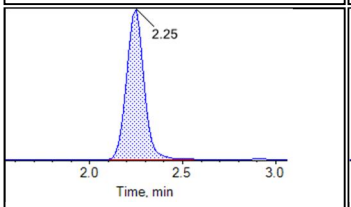
d3-MeFOSAA



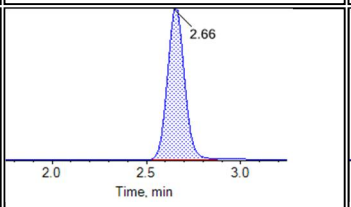
d5-EtFOSAA



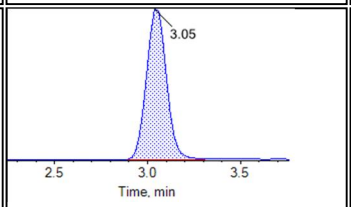
13C5-PFHxA



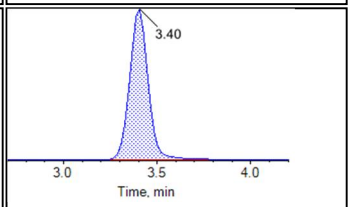
13C4-PFHpA



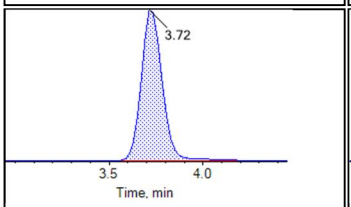
13C8-PFOA



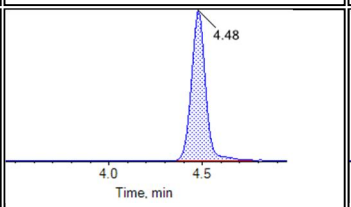
13C9-PFNA



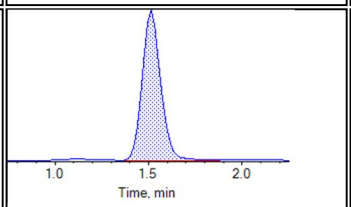
13C6-PFDA



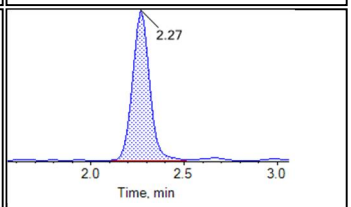
13C7-PFUnA



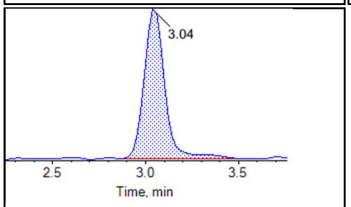
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



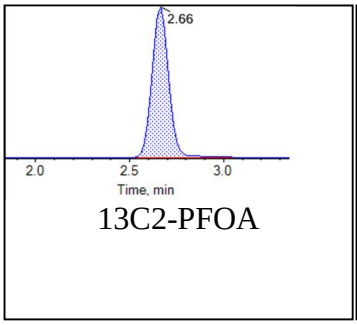
13C8-PFOS

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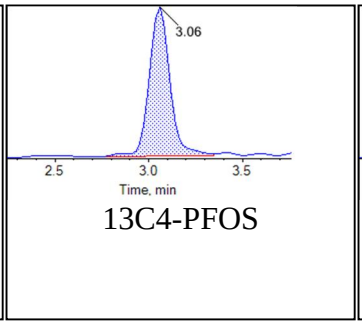
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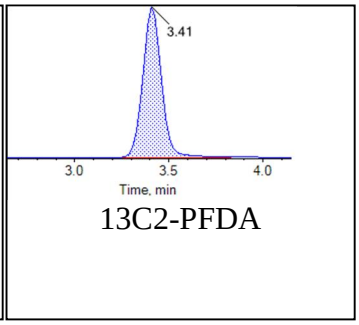
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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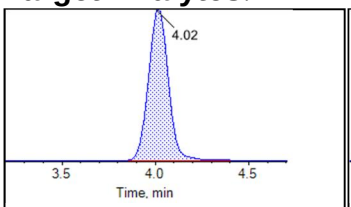
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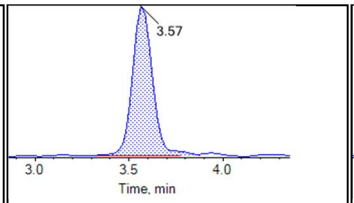
Sample Name	J8410-FS-D(5)	**Injection Vial**	6
Sample ID	VC-AOC16-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:44:38	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

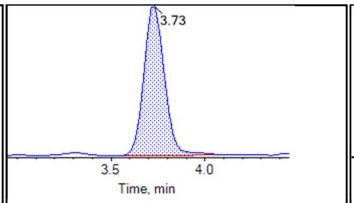
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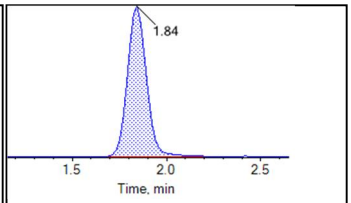
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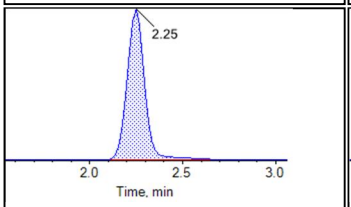
d3-MeFOSAA



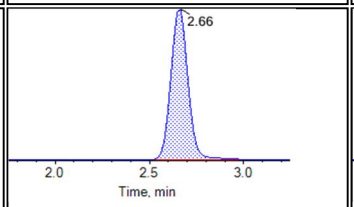
d5-EtFOSAA



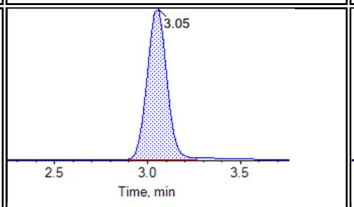
13C5-PFHxA



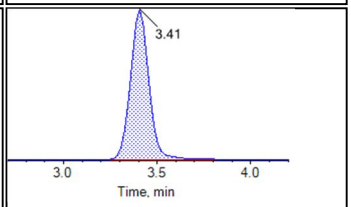
13C4-PFHpA



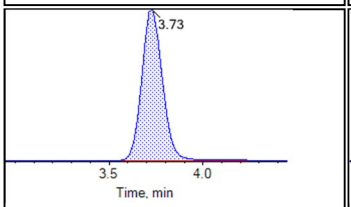
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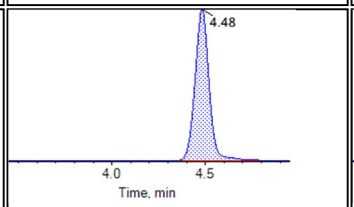
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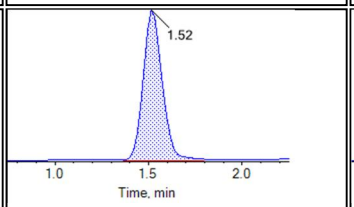
13C6-PFDA



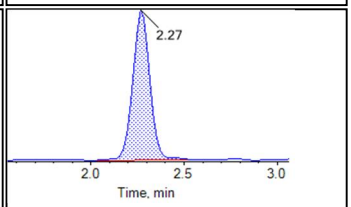
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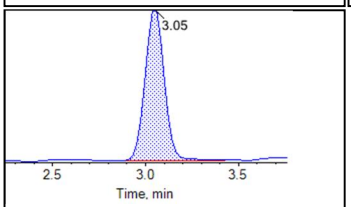
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



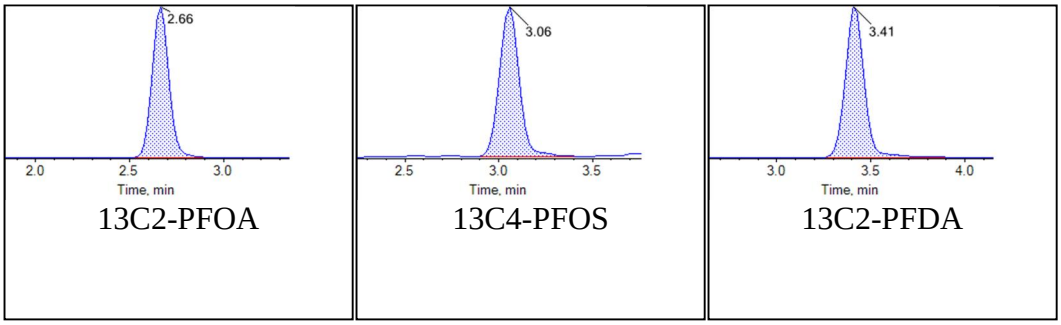
13C8-PFOS

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Internal Standards:



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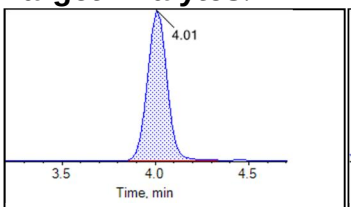
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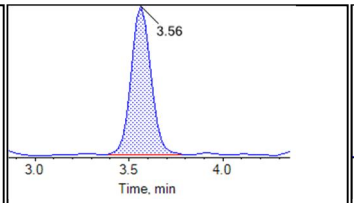
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Sample ID	VC-AOC16-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T20:55:31	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

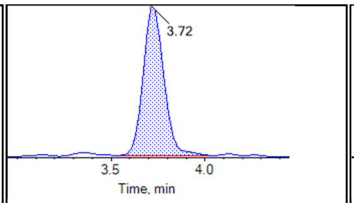
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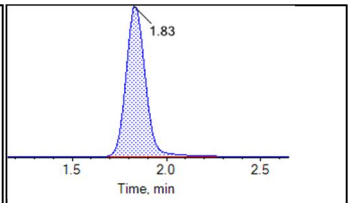
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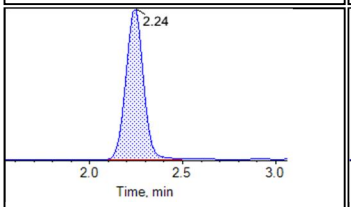
d3-MeFOSAA



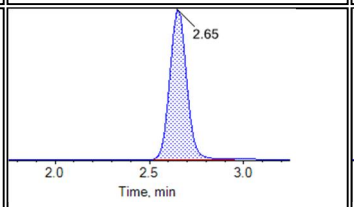
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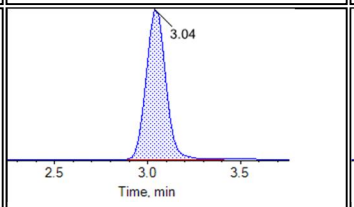
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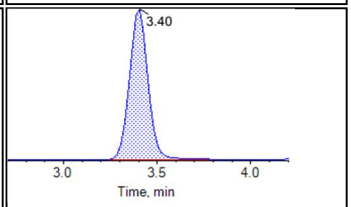
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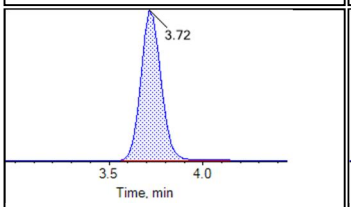
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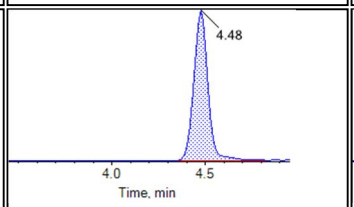
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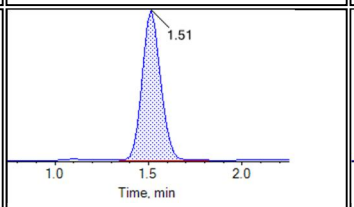
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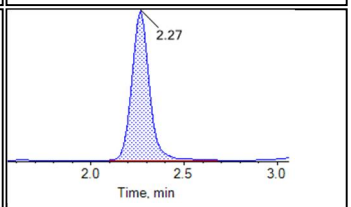
13C7-PFUnA



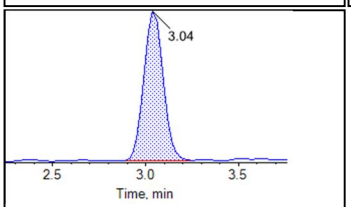
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



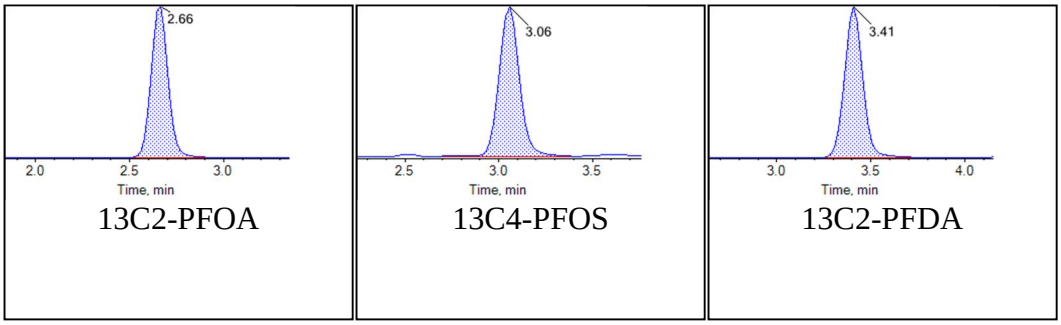
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Internal Standards:



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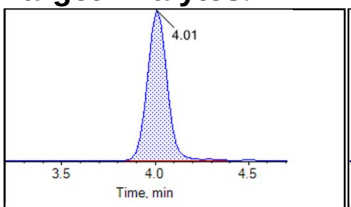
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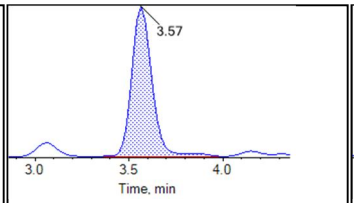
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Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-14T21:06:24	**Data File**	18-0585_18-0583.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0585_18-0583_SIS
Sample Comment			

Chromatograms

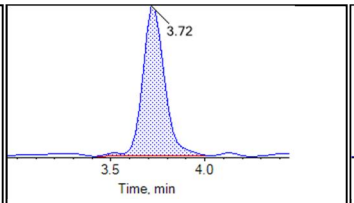
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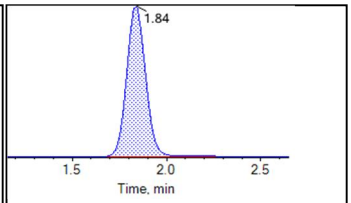
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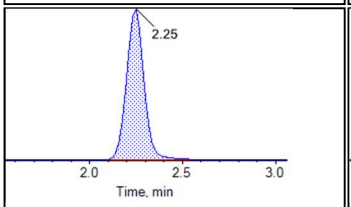
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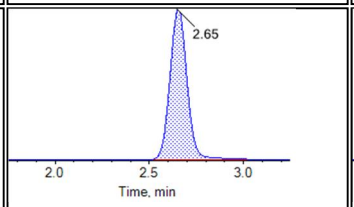
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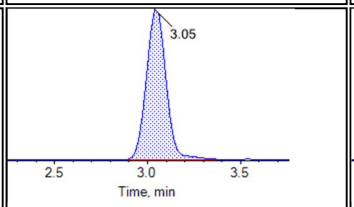
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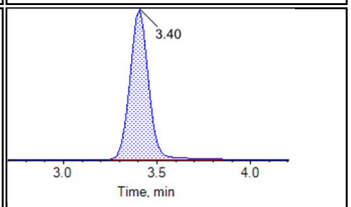
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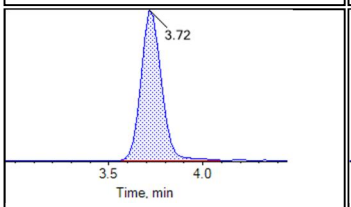
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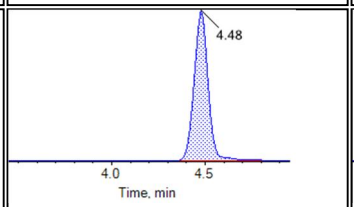
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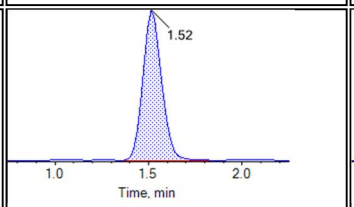
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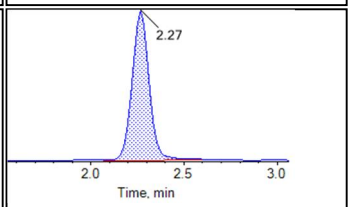
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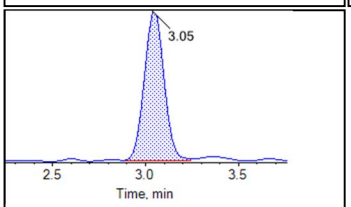
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



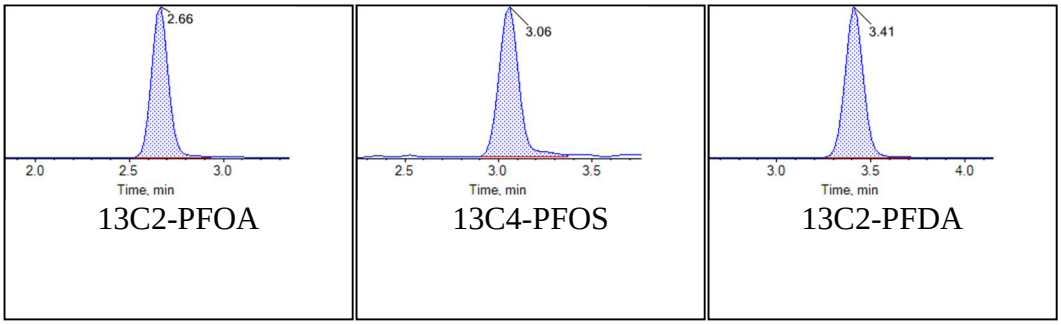
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Internal Standards:



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N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C5-PFHx	BDO-2217	117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C4-PFHp	BDO-2218	116	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C8-PFOA	BDO-2219	117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C9-PFNA	BDO-2221	111	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C6-PFDA	BDO-2222	126	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C7-PFUn	BDO-2223	127	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C2-PFDo	BDO-2112	120	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C2-PFTe	BDO-2224	118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	d3-MeFOS	BDO-1838	95	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	d5-EtFOSA	BDO-1839	116	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C3-PFBS	BDO-2226	105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C3-PFHx	BDO-2227	101	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR894PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:24:29	CR894PB-F	10	1	0	13C8-PFOS	BDO-2228	109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluoroh	307-24-4	83	PCT_REC			TRG	LSA	135	45	20171116		0.33	0.33	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluoroh	375-85-9	84	PCT_REC			TRG	LSA	128	60	20171116		0.44	0.44	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluoroo	335-67-1	85	PCT_REC			TRG	LSA	136	56	20171116		0.5	0.5	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluoro	375-95-1	91	PCT_REC			TRG	LSA	130	54	20171116		0.43	0.43	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluorod	335-76-2	91	PCT_REC			TRG	LSA	141	55	20171116		0.27	0.27	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluorou	2058-94-8	92	PCT_REC			TRG	LSA	137	57	20171116		0.41	0.41	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluorod	307-55-1	88	PCT_REC			TRG	LSA	134	62	20171116		0.24	0.24	5.1		0.5	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluorot	r72629-94-8	93	PCT_REC			TRG	LSA	127	51	20171116		0.28	0.28	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluorot	376-06-7	92	PCT_REC			TRG	LSA	162	34	20171116		0.63	0.63	5.1		2	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	N-Methyl	F2355-31-9	109	PCT_REC			TRG	LSA	146	52	20171116		1.12	1.12	5.1		2.5	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	N-Ethyl Pe	r2991-50-6	96	PCT_REC			TRG	LSA	124	54	20171116		0.57	0.57	5.1		2	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluorob	375-73-5	103	PCT_REC			TRG	LSA	145	57	20171116		0.36	0.36	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluoroh	355-46-4	88	PCT_REC			TRG	LSA	132	52	20171116		0.22	0.22	5.1		0.5	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	Perfluoroo	1763-23-1	82	PCT_REC			TRG	LSA	130	50	20171116		0.27	0.27	5.1		1	5	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C5-PFHx	BDO-2217	129	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C4-PFHp	BDO-2218	123	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C8-PFOA	BDO-2219	122	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C9-PFNA	BDO-2221	120	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C6-PFDA	BDO-2222	123	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C7-PFUn	BDO-2223	121	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C2-PFDo	BDO-2112	126	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C2-PFTe	BDO-2224	124	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	d3-MeFOS	BDO-1838	121	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	d5-EtFOSA	BDO-1839	114	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C3-PFBS	BDO-2226	114	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C3-PFHx	BDO-2227	131	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	CR895LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181014	14:35:21	CR895LCS-	10	1	0	13C8-PFOS	BDO-2228	134	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181014	14:46:12	J8381-FS	10	1	10.07	Perfluoroh	307-24-4	1.1	NG_G	U		TRG						20171116		0.36	0.36	5.1	70	1.1	5.49	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181014	14:46:12	J8381-FS	10	1	10.07	Perfluoroh	375-85-9	1.1	NG_G	U		TRG						20171116		0.48	0.48	5.1	70	1.1	5.49	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181014	14:46:12	J8381-FS	10	1	10.07	Perfluoroo	335-67-1	1.1	NG_G	U		TRG						20171116		0.55	0.55	5.1	70	1.1	5.49	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181014	14:46:12	J8381-FS	10	1	10.07	Perfluoro	375-95-1	1.1	NG_G	U		TRG						20171116		0.47	0.47	5.1	70	1.1	5.49	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181014	14:46:12	J8381-FS	10	1	10.07	Perfluorod	335-76-2	1.1	NG_G	U		TRG						20171116		0.45	0.45	5.1	70	1.1	5.49	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181014	14:46:12	J8381-FS	10	1	10.07	Perfluorou	2058-94-8	1.1	NG_G	U		TRG						20171116		0.26	0.26	5.1	70	0.55	5.49	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181014	14:46:12	J8381-FS	10	1	10.07	Perfluorod	307-55-1	0.55	NG_G	U		TRG						20171116		0.26	0.26	5.1	70	0.55	5.49	18-0585	DP-18-0297		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181014	14:46:12	J8381-FS	10	1	10.07	Perfluorot	r72629-94-8	1.1	NG_G	U		TRG						20171116		0.31	0.31	5.1	70	1.1	5.49	18-0585	DP-18-0

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	SM_Vers	DL		LOD		LOQ		SDG	Analysis_B	Validator_	Val_Date
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		Perfluorot	376-06-7	2.27	NG_G	U		TRG						20171116		0.72	0.72	5.1	70	2.27	5.68	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		N-Methyl F	2355-31-9	2.84	NG_G	U		TRG						20171116		1.27	1.27	5.1	70	2.84	5.68	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		N-Ethyl Pe	r2991-50-6	2.27	NG_G	U		TRG						20171116		0.65	0.65	5.1	70	2.27	5.68	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		Perfluorob	375-73-5	1.14	NG_G	U		TRG						20171116		0.41	0.41	5.1	70	1.14	5.68	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		Perfluoroh	355-46-4	0.37	NG_G	J		TRG						20171116		0.25	0.25	5.1	70	0.57	5.68	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		Perfluoroo	1763-23-1	1.02	NG_G	J		TRG						20171116		0.31	0.31	5.1	70	1.14	5.68	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C5-PFH	x BDO-2217	114	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C4-PFH	p BDO-2218	118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C8-PFO	A BDO-2219	122	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C9-PFN	A BDO-2221	116	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C6-PFD	A BDO-2222	118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C7-PFU	n BDO-2223	117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C2-PFD	o BDO-2112	117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C2-PFT	e BDO-2224	117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		d3-MeFOS	BDO-1838	115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		d5-EtFOS	A BDO-1839	115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C3-PFB	S BDO-2226	131	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C3-PFH	x BDO-2227	113	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:07:57	J8387-FS	10	1	12.36		13C8-PFO	S BDO-2228	125	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluoroh	307-24-4	1.05	NG_G	U		TRG						20171116		0.35	0.35	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluoroh	375-85-9	1.05	NG_G	U		TRG						20171116		0.46	0.46	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluoroo	335-67-1	0.57	NG_G	J		TRG						20171116		0.52	0.52	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluoro	375-95-1	1.05	NG_G	U		TRG						20171116		0.45	0.45	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluorod	335-76-2	1.05	NG_G	U		TRG						20171116		0.28	0.28	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluorou	2058-94-8	1.05	NG_G	U		TRG						20171116		0.43	0.43	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluorod	307-55-1	0.52	NG_G	U		TRG						20171116		0.25	0.25	5.1	70	0.52	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluorot	72629-94-8	1.05	NG_G	U		TRG						20171116		0.29	0.29	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluorot	376-06-7	2.09	NG_G	U		TRG						20171116		0.66	0.66	5.1	70	2.09	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		N-Methyl F	2355-31-9	2.62	NG_G	U		TRG						20171116		1.17	1.17	5.1	70	2.62	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		N-Ethyl Pe	r2991-50-6	2.09	NG_G	U		TRG						20171116		0.6	0.6	5.1	70	2.09	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluorob	375-73-5	1.05	NG_G	U		TRG						20171116		0.38	0.38	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluoroh	355-46-4	0.52	NG_G	U		TRG						20171116		0.23	0.23	5.1	70	0.52	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		Perfluoroo	1763-23-1	1.05	NG_G	U		TRG						20171116		0.28	0.28	5.1	70	1.05	5.24	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C5-PFH	x BDO-2217	127	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C4-PFH	p BDO-2218	122	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C8-PFO	A BDO-2219	127	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C9-PFN	A BDO-2221	115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C6-PFD	A BDO-2222	123	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C7-PFU	n BDO-2223	134	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C2-PFD	o BDO-2112	120	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C2-PFT	e BDO-2224	119	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		d3-MeFOS	BDO-1838	109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		d5-EtFOS	A BDO-1839	107	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C3-PFB	S BDO-2226	94	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C3-PFH	x BDO-2227	99	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:18:49	J8388-FS	10	1	7.28		13C8-PFO	S BDO-2228	112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluoroh	307-24-4	1.18	NG_G	U		TRG						20171116		0.39	0.39	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluoroh	375-85-9	1.18	NG_G	U		TRG						20171116		0.52	0.52	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluoroo	335-67-1	0.66	NG_G	J		TRG						20171116		0.59	0.59	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluoro	375-95-1	1.18	NG_G	U		TRG						20171116		0.51	0.51	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluorod	335-76-2	1.18	NG_G	U		TRG						20171116		0.32	0.32	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluorou	2058-94-8	1.18	NG_G	U		TRG						20171116		0.48	0.48	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluorod	307-55-1	0.59	NG_G	U		TRG						20171116		0.28	0.28	5.1	70	0.59	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluorot	72629-94-8	1.18	NG_G	U		TRG						20171116		0.33	0.33	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluorot	376-06-7	2.35	NG_G	U		TRG						20171116		0.74	0.74	5.1	70	2.35	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		N-Methyl F	2355-31-9	2.94	NG_G	U		TRG						20171116		1.32	1.32	5.1	70	2.94	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		N-Ethyl Pe	r2991-50-6	2.35	NG_G	U		TRG						20171116		0.67	0.67	5.1	70	2.35	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluorob	375-73-5	1.18	NG_G	U		TRG						20171116		0.42	0.42	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluoroh	355-46-4	0.59	NG_G	U		TRG						20171116		0.26	0.26	5.1	70	0.59	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		Perfluoroo	1763-23-1	1.18	NG_G	U		TRG						20171116		0.32	0.32	5.1	70	1.18	5.88	18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:29:41	J8389-FS	10	1	17.47		13C5-PFH	x BDO-2217	121	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297		
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925

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_I	GC_Colum	Analysis_R	Result_Nat	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL	Detection_Q	SM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_I	Val_Date
N6247016	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	15:51:23	J8391-FS	10	1	12.02		13C8-PFO	A	BDO-2219		130	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297			

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Nu	CH2M_Coc	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	QC_Colum	Analysis_R	Result_Nar	QC_Contrc	QC_Accura	QC_Accur	Control_Lir	QC_Narrat	MDL	Detection_	QSM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_	Val_Date
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	16:56:30	J8401-FS	10	1	5		13C3-PFBS	BDO-2226		116	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	16:56:30	J8401-FS	10	1	5		13C3-PFHx	BDO-2227		117	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	16:56:30	J8401-FS	10	1	5		13C8-PFOS	BDO-2228		120	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluoroh	307-24-4		1.09	NG_G	U		TRG				20171116		0.36	0.36	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluoroh	375-85-9		1.09	NG_G	U		TRG				20171116		0.48	0.48	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluoroo	335-67-1		0.67	NG_G	J		TRG				20171116		0.55	0.55	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluoro	375-95-1		1.09	NG_G	U		TRG				20171116		0.47	0.47	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluoro	335-76-2		1.09	NG_G	U		TRG				20171116		0.3	0.3	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluorou	2058-94-8		1.09	NG_G	U		TRG				20171116		0.45	0.45	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluorod	307-55-1		0.55	NG_G	U		TRG				20171116		0.26	0.26	5.1	70	0.55	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluorot	72629-94-8		1.09	NG_G	U		TRG				20171116		0.31	0.31	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluorot	376-06-7		2.19	NG_G	U		TRG				20171116		0.69	0.69	5.1	70	2.19	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		N-Methyl	FZ355-31-9		2.73	NG_G	U		TRG				20171116		1.22	1.22	5.1	70	2.73	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		N-Ethyl Pe	r2991-50-6		2.19	NG_G	U		TRG				20171116		0.62	0.62	5.1	70	2.19	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluorob	375-73-5		1.09	NG_G	U		TRG				20171116		0.39	0.39	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluoroh	355-46-4		0.55	NG_G	U		TRG				20171116		0.24	0.24	5.1	70	0.55	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		Perfluoroo	1763-23-1		0.62	NG_G	J		TRG				20171116		0.3	0.3	5.1	70	1.09	5.46	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C5-PFHx	BDO-2217		122	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C4-PFHp	BDO-2218		123	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C8-PFOA	BDO-2219		125	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C9-PFNA	BDO-2221		118	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C6-PFDA	BDO-2222		125	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C7-PFUn	BDO-2223		125	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C2-PFDo	BDO-2112		120	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C2-PFTe	BDO-2224		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		d3-MeFOS	BDO-1838		109	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		d5-EtFOSA	BDO-1839		100	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C3-PFBS	BDO-2226		114	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C3-PFHx	BDO-2227		121	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-HS09-S	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:07:22	J8402-FS	10	1	8.8		13C8-PFOS	BDO-2228		120	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluoroh	307-24-4		3.23	NG_G	J		TRG				20171116		0.36	0.36	5.1	70	1.08	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluoroh	375-85-9		3.02	NG_G	J		TRG				20171116		0.48	0.48	5.1	70	1.08	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluoroo	335-67-1		28.54	NG_G			TRG				20171116		0.54	0.54	5.1	70	1.08	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluoro	375-95-1		1.67	NG_G	J		TRG				20171116		0.46	0.46	5.1	70	1.08	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluoro	335-76-2		1.08	NG_G	U		TRG				20171116		0.29	0.29	5.1	70	1.08	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluorou	2058-94-8		1.08	NG_G	U		TRG				20171116		0.44	0.44	5.1	70	1.08	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluorod	307-55-1		0.54	NG_G	U		TRG				20171116		0.26	0.26	5.1	70	0.54	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluorot	72629-94-8		1.08	NG_G	U		TRG				20171116		0.3	0.3	5.1	70	1.08	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluorot	376-06-7		2.16	NG_G	U		TRG				20171116		0.68	0.68	5.1	70	2.16	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		N-Methyl	FZ355-31-9		2.7	NG_G	U		TRG				20171116		1.21	1.21	5.1	70	2.7	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		N-Ethyl Pe	r2991-50-6		2.16	NG_G	U		TRG				20171116		0.62	0.62	5.1	70	2.16	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluorob	375-73-5		1.08	NG_G	U		TRG				20171116		0.39	0.39	5.1	70	1.08	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		Perfluoroh	355-46-4		51.28	NG_G			TRG				20171116		0.24	0.24	5.1	70	0.54	5.41	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:29:05	J8403-FS	100	1	10.38		Perfluoroo	1763-23-1		619.8	NG_G	D		TRG				20171116		2.92	2.92	5.1	70	10.81	54.05	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C5-PFHx	BDO-2217		128	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C4-PFHp	BDO-2218		125	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C8-PFOA	BDO-2219		121	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C9-PFNA	BDO-2221		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C6-PFDA	BDO-2222		139	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C7-PFUn	BDO-2223		147	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C2-PFDo	BDO-2112		133	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C2-PFTe	BDO-2224		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:29:05	J8403-FS	100	1	10.38		d3-MeFOS	BDO-1838		105	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:29:05	J8403-FS	100	1	10.38		d5-EtFOSA	BDO-1839		126	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:29:05	J8403-FS	100	1	10.38		13C3-PFBS	BDO-2226		109	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:29:05	J8403-FS	100	1	10.38		13C3-PFHx	BDO-2227		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	17:18:14	J8403-FS	10	1	10.38		13C8-PFOS	BDO-2228		143	PCT_REC			SURR	SLSP	150	50	20171116				5.1					18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	17:39:57	J8404-FS	10	1	12.48		Perfluoroh	307-24-4		12.97	NG_G			TRG				20171116		0.38	0.38	5.1	70	1.14	5.71	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	17:39:57	J8404-FS	10	1	12.48		Perfluoroh	375-85-9		12.8	NG_G			TRG				20171116		0.5	0.5	5.1	70	1.14	5.71	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	17:50:48	J8404-FS	25	1	12.48		Perfluoroo	335-67-1		127.82	NG_G	D		TRG				20171116		1.43	1.43	5.1	70	2.86	14.29	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	17:39:57	J8404-FS	10	1	12.48		Perfluoro	375-95-1		0.72	NG_G	J		TRG				20171116		0.49	0.49	5.1	70	1.14	5.71	18-0585	DP-18-0297		
N6247016(	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002

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_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL		Detection_Q	SM_Vers	DL		LOD		LOQ		SDG	Analysis_B	Validator_	Val_Date
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		Perfluorou	2058-94-8		1.11	NG_G	U			TRG					20171116		0.46	0.46	5.1	70	1.11	5.56	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		Perfluorod	307-55-1		0.56	NG_G	U			TRG					20171116		0.27	0.27	5.1	70	0.56	5.56	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		Perfluorotr	72629-94-8		1.11	NG_G	U			TRG					20171116		0.31	0.31	5.1	70	1.11	5.56	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		Perfluorot	376-06-7		2.22	NG_G	U			TRG					20171116		0.7	0.7	5.1	70	2.22	5.56	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		N-Methyl F	2355-31-9		2.78	NG_G	U			TRG					20171116		1.24	1.24	5.1	70	2.78	5.56	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		N-Ethyl Pe	r2991-50-6		2.22	NG_G	U			TRG					20171116		0.63	0.63	5.1	70	2.22	5.56	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		Perfluorob	375-73-5		0.82	NG_G	J			TRG					20171116		0.4	0.4	5.1	70	1.11	5.56	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		Perfluoroh	355-46-4		52.67	NG_G				TRG					20171116		0.24	0.24	5.1	70	0.56	5.56	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:55:58	J8406-FS	166.67	1	10.1		Perfluorod	1763-23-1		1365.15	NG_G	D			TRG					20171116		5	5	5.1	70	18.52	92.59	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C5-PFHx	BDO-2217		131	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C4-PFHp	BDO-2218		123	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C8-PFOA	BDO-2219		114	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C9-PFNA	BDO-2221		95	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C6-PFDA	BDO-2222		130	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C7-PFUn	BDO-2223		129	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C2-PFDo	BDO-2112		114	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C2-PFTe	BDO-2224		116	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:55:58	J8406-FS	166.67	1	10.1		d3-MeFOS	BDO-1838		103	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:55:58	J8406-FS	166.67	1	10.1		d5-EtFOSA	BDO-1839		132	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:55:58	J8406-FS	166.67	1	10.1		13C3-PFBS	BDO-2226		97	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:55:58	J8406-FS	166.67	1	10.1		13C3-PFHx	BDO-2227		97	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	18:45:06	J8406-FS	10	1	10.1		13C8-PFOS	BDO-2228		147	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluoroh	307-24-4		14.94	NG_G				TRG					20171116		0.36	0.36	5.1	70	1.09	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorob	375-85-9		4.68	NG_G	J			TRG					20171116		0.48	0.48	5.1	70	1.09	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorod	335-67-1		33.53	NG_G				TRG					20171116		0.55	0.55	5.1	70	1.09	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorob	375-95-1		1.3	NG_G	J			TRG					20171116		0.47	0.47	5.1	70	1.09	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorod	335-76-2		1.09	NG_G	U			TRG					20171116		0.3	0.3	5.1	70	1.09	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorou	2058-94-8		1.09	NG_G	U			TRG					20171116		0.45	0.45	5.1	70	1.09	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorod	307-55-1		0.55	NG_G	U			TRG					20171116		0.26	0.26	5.1	70	0.55	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorotr	72629-94-8		1.09	NG_G	U			TRG					20171116		0.31	0.31	5.1	70	1.09	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorot	376-06-7		2.19	NG_G	U			TRG					20171116		0.69	0.69	5.1	70	2.19	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		N-Methyl F	2355-31-9		2.73	NG_G	U			TRG					20171116		1.22	1.22	5.1	70	2.73	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		N-Ethyl Pe	r2991-50-6		2.19	NG_G	U			TRG					20171116		0.62	0.62	5.1	70	2.19	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		Perfluorob	375-73-5		1.39	NG_G	J			TRG					20171116		0.39	0.39	5.1	70	1.09	5.46	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:17:41	J8407-FS	20	1	9.75		Perfluoroh	355-46-4		117.52	NG_G	D			TRG					20171116		0.48	0.48	5.1	70	1.09	10.93	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:28:31	J8407-FS	125	1	9.75		Perfluorod	1763-23-1		834.11	NG_G	D			TRG					20171116		3.69	3.69	5.1	70	13.66	68.31	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		13C5-PFHx	BDO-2217		127	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		13C4-PFHp	BDO-2218		127	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		13C8-PFOA	BDO-2219		113	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		13C9-PFNA	BDO-2221		110	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		13C6-PFDA	BDO-2222		133	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		13C7-PFUn	BDO-2223		124	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		13C2-PFDo	BDO-2112		124	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	19:06:50	J8407-FS	10	1	9.75		13C2-PFTe	BDO-2224		117	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	20:01:06	J8409-FS	125	1	9.77		d3-MeFOS	BDO-1838		116	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	20:01:06	J8409-FS	125	1	9.77		d5-EtFOSA	BDO-1839		127	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	20:01:06	J8409-FS	125	1	9.77		13C3-PFBS	BDO-2226		105	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	20:01:06	J8409-FS	125	1	9.77		13C3-PFHx	BDO-2227		105	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180925	20180927			20181002	16:17:00	20181014	19:50:12	J8409-FS	10	1	9.77		13C8-PFOS	BDO-2228		118	PCT_REC				SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluoroh	307-24-4		7.09	NG_G				TRG					20171116		0.36	0.36	5.1	70	1.1	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluorob	375-85-9		1.86	NG_G	J			TRG					20171116		0.48	0.48	5.1	70	1.1	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluorod	335-67-1		5.22	NG_G	J			TRG					20171116		0.55	0.55	5.1	70	1.1	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluorob	375-95-1		1.1	NG_G	U			TRG					20171116		0.47	0.47	5.1	70	1.1	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluorod	335-76-2		1.1	NG_G	U			TRG					20171116		0.3	0.3	5.1	70	1.1	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluorou	2058-94-8		1.1	NG_G	U			TRG					20171116		0.45	0.45	5.1	70	1.1	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluorotr	72629-94-8		1.1	NG_G	U			TRG					20171116		0.31	0.31	5.1	70	1.1	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluorot	376-06-7		2.2	NG_G	U			TRG					20171116		0.69	0.69	5.1	70	2.2	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		N-Methyl F	2355-31-9		2.75	NG_G	U			TRG					20171116		1.23	1.23	5.1	70	2.75	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		N-Ethyl Pe	r2991-50-6		2.2	NG_G	U			TRG					20171116		0.63	0.63	5.1	70	2.2	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		Perfluorob	375-73-5		1.1	NG_G	U			TRG					20171116		0.4	0.4	5.1	70	1.1	5.49	18-0585	DP-18-0297				
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014

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	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:44:38	J8410-FS	125	1	11.65		Perfluoro	1763-23-1	651.49	NG_G	D		TRG				20171116		3.71	3.71	5.1	70	13.74	68.68	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		13C5-PFH	x BDO-2217	119	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		13C4-PFH	p BDO-2218	112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		13C8-PFO	A BDO-2219	122	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		13C9-PFN	A BDO-2221	102	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		13C6-PFD	A BDO-2222	127	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		13C7-PFU	n BDO-2223	129	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		13C2-PFD	o BDO-2112	111	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:33:46	J8410-FS	10	1	11.65		13C2-PFT	e BDO-2224	110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:44:38	J8410-FS	125	1	11.65		d3-MeFOS	BDO-1838	112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:44:38	J8410-FS	125	1	11.65		d5-EtFOS	A BDO-1839	110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:44:38	J8410-FS	125	1	11.65		13C3-PFB	S BDO-2226	99	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:44:38	J8410-FS	125	1	11.65		13C3-PFH	x BDO-2227	109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:44:38	J8410-FS	125	1	11.65		13C8-PFO	S BDO-2228	121	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	h 307-24-4	14.21	NG_G			TRG				20171116		0.4	0.4	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	h 375-85-9	2.77	NG_G	J		TRG				20171116		0.54	0.54	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	o 335-67-1	44.68	NG_G			TRG				20171116		0.61	0.61	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	n 375-95-1	1.22	NG_G	U		TRG				20171116		0.52	0.52	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	d 335-76-2	1.22	NG_G	U		TRG				20171116		0.33	0.33	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	u 2058-94-8	1.22	NG_G	U		TRG				20171116		0.5	0.5	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	d 307-55-1	0.61	NG_G	U		TRG				20171116		0.29	0.29	5.1	70	0.61	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluorot	72629-94-8	1.22	NG_G	U		TRG				20171116		0.34	0.34	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluorot	x 376-06-7	2.44	NG_G	U		TRG				20171116		0.77	0.77	5.1	70	2.44	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		N-Methyl	F 2355-31-9	3.05	NG_G	U		TRG				20171116		1.37	1.37	5.1	70	3.05	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		N-Ethyl P	er 2991-50-6	2.44	NG_G	U		TRG				20171116		0.7	0.7	5.1	70	2.44	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	b 375-73-5	3.54	NG_G	J		TRG				20171116		0.44	0.44	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	h 355-46-4	8.55	NG_G			TRG				20171116		0.27	0.27	5.1	70	0.61	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		Perfluoro	1763-23-1	0.9	NG_G	J		TRG				20171116		0.33	0.33	5.1	70	1.22	6.1	18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C5-PFH	x BDO-2217	109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C4-PFH	p BDO-2218	104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C8-PFO	A BDO-2219	105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C9-PFN	A BDO-2221	109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C6-PFD	A BDO-2222	116	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C7-PFU	n BDO-2223	122	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C2-PFD	o BDO-2112	110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C2-PFT	e BDO-2224	108	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		d3-MeFOS	BDO-1838	93	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		d5-EtFOS	A BDO-1839	106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C3-PFB	S BDO-2226	116	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C3-PFH	x BDO-2227	120	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									
N6247016	4164		POINT_MU	VC-AOC16-	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180925	20180927			20181002	16:17:00	20181014	20:55:31	J8411-FS	10	1	19.6		13C8-PFO	S BDO-2228	121	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0585	DP-18-0297									

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
NAVAL BASE VENTURA COUNTY, CALIFORNIA

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 18-0585
Laboratory: Battelle Norwell Operations, Norwell, Massachusetts
Site: Naval Base Ventura County, CTO-4164, California
Date: January 11, 2019

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	VC-PM64B-SB03-0506	J8381-FS	Soil
2	VC-HS09-SB01-0102	J8386-FS	Soil
3	VC-HS09-SB01-0506	J8387-FS	Soil
4	VC-HS09-SB02-0102	J8388-FS	Soil
5	VC-HS09-SB02-0506	J8389-FS	Soil
6	VC-HS09-SS03-000H	J8390-FS	Soil
7	VC-HS09-SB03-0102	J8391-FS	Soil
8	VC-HS09-SB03-0506	J8392-FS	Soil
8MS	VC-HS09-SB03-0506MS	J8392-FSMS	Soil
8MSD	VC-HS09-SB03-0506MSD	J8392-FSMSD	Soil
9	VC-HS09-SS01-000H	J8401-FS	Soil
10	VC-HS09-SS02-000H	J8402-FS	Soil
11	VC-AOC16-SS01-000H	J8403-FS	Soil
12	VC-AOC16-SB01-0102	J8404-FS	Soil
13	VC-AOC16-SB01-0506	J8405-FS	Soil
14	VC-AOC16-SS02-000H	J8406-FS	Soil
15	VC-AOC16-SB02-0102	J8407-FS	Soil
16	VC-AOC16-SB02-0506	J8408-FS	Soil
17	VC-AOC16-SS03-000H	J8409-FS	Soil
18	VC-AOC16-SB03-0102	J8410-FS	Soil
19	VC-AOC16-SB03-0506	J8411-FS	Soil

A full data validation was performed on the analytical data for nineteen soil samples collected on September 24-25, 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-AQ-FB-092518	None - ND	-	-	-
VC-AQ-EB-092518	PFBS	0.69	U	9, 12-15, 17, 19
	PFOS	0.17	U	3, 6-7, 10, 19
VC-SO-EB05-092418	PFHxA	44.45	None	All associated ND
	PFHpA	4.71	None	All associated ND
	PFBS	16.43	None	All associated ND
	PFHxS	133.30	U	1
	PFOS	213.24	U	1
VC-SO-FB05-092418	PFOS	0.26	None	See EB05

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

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

- The MS/MSD samples exhibited acceptable percent recoveries (%R) and RPD values.

Laboratory Control Samples

- The LCS samples exhibited acceptable percent recoveries (%R).

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. The reporting limits were adjusted accordingly. No action was required.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 1/11/19

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

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It can be done

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

Client ID		VC-PM64B-SB03-0506				
Battelle ID		J8381-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		10.07				
Matrix		SB				
Sample Size		1.820				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.10	U	0.36	1.10	5.49
PFHpA	375-85-9	1.10	U	0.48	1.10	5.49
PFOA	335-67-1	1.10	U	0.55	1.10	5.49
PFNA	375-95-1	1.10	U	0.47	1.10	5.49
PFDA	335-76-2	1.10	U	0.30	1.10	5.49
PFUnA	2058-94-8	1.10	U	0.45	1.10	5.49
PFDoA	307-55-1	0.55	U	0.26	0.55	5.49
PFTrDA	72629-94-8	1.10	U	0.31	1.10	5.49
PFTeDA	376-06-7	2.20	U	0.69	2.20	5.49
NMeFOSAA	2355-31-9	2.75	U	1.23	2.75	5.49
NEtFOSAA	2991-50-6	2.20	U	0.63	2.20	5.49
PFBS	375-73-5	1.10	U	0.40	1.10	5.49
PFHxS	355-46-4	1.37	U	0.24	0.55	5.49
PFOS	1763-23-1	3.22	U	0.30	1.10	5.49

EBL
EBL

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	120
13C8-PFOA	130
13C9-PFNA	125
13C6-PFDA	122
13C7-PFUnA	133
13C2-PFDoA	120
13C2-PFTeDA	125
d3-MeFOSAA	112
d5-EtFOSAA	119
13C3-PFBS	115
13C3-PFHxS	114
13C8-PFOS	104

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2

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

Client ID		VC-HS09-SB01-0102			
Battelle ID		J8386-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		6.91			
Matrix		SB			
Sample Size		1.860			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.08 U	0.35	1.08	5.38
PFHpA	375-85-9	0.50 J	0.47	1.08	5.38
PFOA	335-67-1	3.61 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	3.74 J	0.24	0.54	5.38
PFOS	1763-23-1	19.21	0.29	1.08	5.38
Surrogate Recoveries (%)					
13C5-PFHxA		119			
13C4-PFHpA		121			
13C8-PFOA		119			
13C9-PFNA		109			
13C6-PFDA		127			
13C7-PFUnA		93			
13C2-PFDoA		114			
13C2-PFTeDA		126			
d3-MeFOSAA		119			
d5-EtFOSAA		80			
13C3-PFBS		126			
13C3-PFHxS		127			
13C8-PFOS		113			

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3

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

Client ID		VC-HS09-SB01-0506			
Battelle ID		J8387-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		12.36			
Matrix		SB			
Sample Size		1.760			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.14 U	0.38	1.14	5.68
PFHpA	375-85-9	1.14 U	0.50	1.14	5.68
PFOA	335-67-1	0.65 J	0.57	1.14	5.68
PFNA	375-95-1	1.14 U	0.49	1.14	5.68
PFDA	335-76-2	1.14 U	0.31	1.14	5.68
PFUnA	2058-94-8	1.14 U	0.47	1.14	5.68
PFDoA	307-55-1	0.57 U	0.27	0.57	5.68
PFTrDA	72629-94-8	1.14 U	0.32	1.14	5.68
PFTeDA	376-06-7	2.27 U	0.72	2.27	5.68
NMeFOSAA	2355-31-9	2.84 U	1.27	2.84	5.68
NEtFOSAA	2991-50-6	2.27 U	0.65	2.27	5.68
PFBS	375-73-5	1.14 U	0.41	1.14	5.68
PFHxS	355-46-4	0.37 J	0.25	0.57	5.68
PFOS	1763-23-1	1.14 ~~1.02 J~~ U	0.31	1.14	5.68

EBL

Surrogate Recoveries (%)	
13C5-PFHxA	114
13C4-PFHpA	118
13C8-PFOA	122
13C9-PFNA	116
13C6-PFDA	118
13C7-PFUnA	117
13C2-PFDoA	117
13C2-PFTeDA	117
d3-MeFOSAA	115
d5-EtFOSAA	115
13C3-PFBS	131
13C3-PFHxS	113
13C8-PFOS	125

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4

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

Client ID		VC-HS09-SB02-0102			
Battelle ID		J8388-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		7.28			
Matrix		SB			
Sample Size		1.910			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.05 U	0.35	1.05	5.24
PFHpA	375-85-9	1.05 U	0.46	1.05	5.24
PFOA	335-67-1	0.57 J	0.52	1.05	5.24
PFNA	375-95-1	1.05 U	0.45	1.05	5.24
PFDA	335-76-2	1.05 U	0.28	1.05	5.24
PFUnA	2058-94-8	1.05 U	0.43	1.05	5.24
PFDoA	307-55-1	0.52 U	0.25	0.52	5.24
PFTrDA	72629-94-8	1.05 U	0.29	1.05	5.24
PFTeDA	376-06-7	2.09 U	0.66	2.09	5.24
NMeFOSAA	2355-31-9	2.62 U	1.17	2.62	5.24
NEtFOSAA	2991-50-6	2.09 U	0.60	2.09	5.24
PFBS	375-73-5	1.05 U	0.38	1.05	5.24
PFHxS	355-46-4	0.52 U	0.23	0.52	5.24
PFOS	1763-23-1	1.05 U	0.28	1.05	5.24

Surrogate Recoveries (%)

13C5-PFHxA	127
13C4-PFHpA	122
13C8-PFOA	127
13C9-PFNA	115
13C6-PFDA	123
13C7-PFUnA	134
13C2-PFDoA	120
13C2-PFTeDA	119
d3-MeFOSAA	109
d5-EtFOSAA	107
13C3-PFBS	94
13C3-PFHxS	99
13C8-PFOS	112

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5

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

Client ID		VC-HS09-SB02-0506			
Battelle ID		J8389-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		17.47			
Matrix		SB			
Sample Size		1.700			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.18 U	0.39	1.18	5.88
PFHpA	375-85-9	1.18 U	0.52	1.18	5.88
PFOA	335-67-1	0.66 J	0.59	1.18	5.88
PFNA	375-95-1	1.18 U	0.51	1.18	5.88
PFDA	335-76-2	1.18 U	0.32	1.18	5.88
PFUnA	2058-94-8	1.18 U	0.48	1.18	5.88
PFDoA	307-55-1	0.59 U	0.28	0.59	5.88
PFTrDA	72629-94-8	1.18 U	0.33	1.18	5.88
PFTeDA	376-06-7	2.35 U	0.74	2.35	5.88
NMeFOSAA	2355-31-9	2.94 U	1.32	2.94	5.88
NEtFOSAA	2991-50-6	2.35 U	0.67	2.35	5.88
PFBS	375-73-5	1.18 U	0.42	1.18	5.88
PFHxS	355-46-4	0.59 U	0.26	0.59	5.88
PFOS	1763-23-1	1.18 U	0.32	1.18	5.88

Surrogate Recoveries (%)

13C5-PFHxA	121
13C4-PFHpA	121
13C8-PFOA	127
13C9-PFNA	126
13C6-PFDA	129
13C7-PFUnA	134
13C2-PFDoA	120
13C2-PFTeDA	123
d3-MeFOSAA	115
d5-EtFOSAA	107
13C3-PFBS	114
13C3-PFHxS	118
13C8-PFOS	131

11/21 28 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-HS09-SS03-000H			
Battelle ID		J8390-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		12.32			
Matrix		SS			
Sample Size		1.780			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.12 U	0.37	1.12	5.62
PFHpA	375-85-9	1.12 U	0.49	1.12	5.62
PFOA	335-67-1	0.73 J	0.56	1.12	5.62
PFNA	375-95-1	1.12 U	0.48	1.12	5.62
PFDA	335-76-2	1.12 U	0.30	1.12	5.62
PFUnA	2058-94-8	1.12 U	0.46	1.12	5.62
PFDoA	307-55-1	0.56 U	0.27	0.56	5.62
PFTrDA	72629-94-8	1.12 U	0.31	1.12	5.62
PFTeDA	376-06-7	2.25 U	0.71	2.25	5.62
NMeFOSAA	2355-31-9	2.81 U	1.26	2.81	5.62
NEtFOSAA	2991-50-6	2.25 U	0.64	2.25	5.62
PFBS	375-73-5	1.12 U	0.40	1.12	5.62
PFHxS	355-46-4	0.56 U	0.25	0.56	5.62
PFOS	1763-23-1	1.44 J U	0.30	1.12	5.62

EBL

Surrogate Recoveries (%)

13C5-PFHxA	128
13C4-PFHpA	121
13C8-PFOA	131
13C9-PFNA	131
13C6-PFDA	125
13C7-PFUnA	133
13C2-PFDoA	115
13C2-PFTeDA	122
d3-MeFOSAA	128
d5-EtFOSAA	139
13C3-PFBS	126
13C3-PFHxS	121
13C8-PFOS	124

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7

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

Client ID	VC-HS09-SB03-0102
Battelle ID	J8391-FS
Sample Type	SA
Collection Date	09/25/2018
Extraction Date	10/02/2018
Analysis Date	10/14/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	12.02
Matrix	SB
Sample Size	1.810
Size Unit-Basis	g
Units	ng/g_Dry

			MDL	LOD	LOQ	
PFHxA	307-24-4	1.10 U	0.36	1.10	5.52	
PFHpA	375-85-9	1.10 U	0.49	1.10	5.52	
PFOA	335-67-1	1.10 U	0.55	1.10	5.52	
PFNA	375-95-1	1.10 U	0.48	1.10	5.52	
PFDA	335-76-2	1.10 U	0.30	1.10	5.52	
PFUnA	2058-94-8	1.10 U	0.45	1.10	5.52	
PFDoA	307-55-1	0.55 U	0.27	0.55	5.52	
PFTrDA	72629-94-8	1.10 U	0.31	1.10	5.52	
PFTeDA	376-06-7	2.21 U	0.70	2.21	5.52	
NMeFOSAA	2355-31-9	2.76 U	1.24	2.76	5.52	
NEtFOSAA	2991-50-6	2.21 U	0.63	2.21	5.52	
PFBS	375-73-5	1.10 U	0.40	1.10	5.52	
PFHxS	355-46-4	0.55 U	0.24	0.55	5.52	
PFOS	1763-23-1	1.10 ~~0.53 J~~ U	0.30	1.10	5.52	EBL

Surrogate Recoveries (%)

13C5-PFHxA	125
13C4-PFHpA	136
13C8-PFOA	130
13C9-PFNA	140
13C6-PFDA	129
13C7-PFUnA	133
13C2-PFDoA	116
13C2-PFTeDA	126
d3-MeFOSAA	116
d5-EtFOSAA	134
13C3-PFBS	120
13C3-PFHxS	126
13C8-PFOS	133

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8

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

Client ID		VC-HS09-SB03-0506			
Battelle ID		J8392-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		18.92			
Matrix		SB			
Sample Size		1.660			
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	109
13C4-PFHpA	112
13C8-PFOA	118
13C9-PFNA	108
13C6-PFDA	133
13C7-PFUnA	129
13C2-PFDoA	121
13C2-PFTeDA	116
d3-MeFOSAA	118
d5-EtFOSAA	114
13C3-PFBS	101
13C3-PFHxS	112
13C8-PFOS	110

11/28/18

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9

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

Client ID		VC-HS09-SS01-000H			
Battelle ID		J8401-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		5.00			
Matrix		SS			
Sample Size		1.940			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.75 J	0.34	1.03	5.15
PFHpA	375-85-9	0.77 J	0.45	1.03	5.15
PFOA	335-67-1	2.78 J	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 ~~0.42 J~~ U	0.37	1.03	5.15 EBL
PFHxS	355-46-4	7.22	0.23	0.52	5.15
PFOS	1763-23-1	22.48	0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	123
13C4-PFHpA	129
13C8-PFOA	121
13C9-PFNA	120
13C6-PFDA	126
13C7-PFUnA	123
13C2-PFDoA	116
13C2-PFTeDA	124
d3-MeFOSAA	98
d5-EtFOSAA	110
13C3-PFBS	116
13C3-PFHxS	117
13C8-PFOS	120

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10

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

Client ID	VC-HS09-SS02-000H				
Battelle ID	J8402-FS				
Sample Type	SA				
Collection Date	09/25/2018				
Extraction Date	10/02/2018				
Analysis Date	10/14/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	8.80				
Matrix	SS				
Sample Size	1.830				
Size Unit-Basis	g				
Units	ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.09 U	0.36	1.09	5.46
PFHpA	375-85-9	1.09 U	0.48	1.09	5.46
PFOA	335-67-1	0.67 J	0.55	1.09	5.46
PFNA	375-95-1	1.09 U	0.47	1.09	5.46
PFDA	335-76-2	1.09 U	0.30	1.09	5.46
PFUnA	2058-94-8	1.09 U	0.45	1.09	5.46
PFDoA	307-55-1	0.55 U	0.26	0.55	5.46
PFTrDA	72629-94-8	1.09 U	0.31	1.09	5.46
PFTeDA	376-06-7	2.19 U	0.69	2.19	5.46
NMeFOSAA	2355-31-9	2.73 U	1.22	2.73	5.46
NEtFOSAA	2991-50-6	2.19 U	0.62	2.19	5.46
PFBS	375-73-5	1.09 U	0.39	1.09	5.46
PFHxS	355-46-4	0.55 U	0.24	0.55	5.46
PFOS	1763-23-1	1.09 ~~0.62 J~~ U	0.30	1.09	5.46

EBL

Surrogate Recoveries (%)

13C5-PFHxA	122
13C4-PFHpA	123
13C8-PFOA	125
13C9-PFNA	118
13C6-PFDA	125
13C7-PFUnA	125
13C2-PFDoA	120
13C2-PFTeDA	115
d3-MeFOSAA	109
d5-EtFOSAA	100
13C3-PFBS	114
13C3-PFHxS	121
13C8-PFOS	120

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11

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

Client ID		VC-AOC16-SS01-000H			
Battelle ID		J8403-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		10.38			
Matrix		SS			
Sample Size		1.850			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	3.23 J	0.36	1.08	5.41
PFHpA	375-85-9	3.02 J	0.48	1.08	5.41
PFOA	335-67-1	28.54	0.54	1.08	5.41
PFNA	375-95-1	1.67 J	0.46	1.08	5.41
PFDA	335-76-2	1.08 U	0.29	1.08	5.41
PFUnA	2058-94-8	1.08 U	0.44	1.08	5.41
PFDoA	307-55-1	0.54 U	0.26	0.54	5.41
PFTrDA	72629-94-8	1.08 U	0.30	1.08	5.41
PFTeDA	376-06-7	2.16 U	0.68	2.16	5.41
NMeFOSAA	2355-31-9	2.70 U	1.21	2.70	5.41
NEtFOSAA	2991-50-6	2.16 U	0.62	2.16	5.41
PFBS	375-73-5	1.08 U	0.39	1.08	5.41
PFHxS	355-46-4	51.28	0.24	0.54	5.41
PFOS	1763-23-1	619.80	2.92	10.81	54.05
Surrogate Recoveries (%)					
13C5-PFHxA		128			
13C4-PFHpA		125			
13C8-PFOA		121			
13C9-PFNA		110			
13C6-PFDA		139			
13C7-PFUnA		147			
13C2-PFDoA		133			
13C2-PFTeDA		132			
d3-MeFOSAA		105			
d5-EtFOSAA		126			
13C3-PFBS		109			
13C3-PFHxS		115			
13C8-PFOS		143			

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12

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

Client ID		VC-AOC16-SB01-0102				
Battelle ID		J8404-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		12.48				
Matrix		SB				
Sample Size		1.750				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	12.97		0.38	1.14	5.71
PFHpA	375-85-9	12.80		0.50	1.14	5.71
PFOA	335-67-1	127.82		1.43	2.86	14.29
PFNA	375-95-1	0.72	J	0.49	1.14	5.71
PFDA	335-76-2	1.14	U	0.31	1.14	5.71
PFUnA	2058-94-8	1.14	U	0.47	1.14	5.71
PFDoA	307-55-1	0.57	U	0.27	0.57	5.71
PFTrDA	72629-94-8	1.14	U	0.32	1.14	5.71
PFTeDA	376-06-7	2.29	U	0.72	2.29	5.71
NMeFOSAA	2355-31-9	2.86	U	1.28	2.86	5.71
NEtFOSAA	2991-50-6	2.29	U	0.65	2.29	5.71
PFBS	375-73-5	1.14 ~~1.08~~	U	0.41	1.14	5.71 EBL
PFHxS	355-46-4	108.81		0.63	1.43	14.29
PFOS	1763-23-1	297.43		1.54	5.71	28.57
Surrogate Recoveries (%)						
13C5-PFHxA		118				
13C4-PFHpA		112				
13C8-PFOA		106				
13C9-PFNA		111				
13C6-PFDA		117				
13C7-PFUnA		119				
13C2-PFDoA		114				
13C2-PFTeDA		114				
d3-MeFOSAA		105				
d5-EtFOSAA		133				
13C3-PFBS		134				
13C3-PFHxS		125				
13C8-PFOS		118				

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13

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

Client ID		VC-AOC16-SB01-0506				
Battelle ID		J8405-FS				
Sample Type		SA				
Collection Date		09/25/2018				
Extraction Date		10/02/2018				
Analysis Date		10/14/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		21.18				
Matrix		SB				
Sample Size		1.580				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	15.71		0.42	1.27	6.33
PFHpA	**375-85-9**	**1.92 J**		**0.56**	**1.27**	**6.33**
PFOA	335-67-1	1.45 J		0.63	1.27	6.33
PFNA	**375-95-1**	**1.27 U**		**0.54**	**1.27**	**6.33**
PFDA	335-76-2	1.27 U		0.34	1.27	6.33
PFUnA	**2058-94-8**	**1.27 U**		**0.52**	**1.27**	**6.33**
PFDoA	307-55-1	0.63 U		0.30	0.63	6.33
PFTrDA	**72629-94-8**	**1.27 U**		**0.35**	**1.27**	**6.33**
PFTeDA	376-06-7	2.53 U		0.80	2.53	6.33
NMeFOSAA	**2355-31-9**	**3.16 U**		**1.42**	**3.16**	**6.33**
NEtFOSAA	2991-50-6	2.53 U		0.72	2.53	6.33
PFBS	**375-73-5**	**4.53 J U**		**0.46**	**1.27**	**6.33**
PFHxS	355-46-4	1.86 J		0.28	0.63	6.33
PFOS	**1763-23-1**	**3.72 J**		**0.34**	**1.27**	**6.33**

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Surrogate Recoveries (%)	
13C5-PFHxA	120
13C4-PFHpA	**114**
13C8-PFOA	120
13C9-PFNA	**123**
13C6-PFDA	143
13C7-PFUnA	**145**
13C2-PFDoA	129
13C2-PFTeDA	**125**
d3-MeFOSAA	129
d5-EtFOSAA	**141**
13C3-PFBS	122
13C3-PFHxS	**123**
13C8-PFOS	135

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14

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

Client ID		VC-AOC16-SS02-000H			
Battelle ID		J8406-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		10.10			
Matrix		SS			
Sample Size		1.800			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	9.87	0.37	1.11	5.56
PFHpA	375-85-9	1.89 J	0.49	1.11	5.56
PFOA	335-67-1	6.02	0.56	1.11	5.56
PFNA	375-95-1	0.71 J	0.48	1.11	5.56
PFDA	335-76-2	1.11 U	0.30	1.11	5.56
PFUnA	2058-94-8	1.11 U	0.46	1.11	5.56
PFDoA	307-55-1	0.56 U	0.27	0.56	5.56
PFTrDA	72629-94-8	1.11 U	0.31	1.11	5.56
PFTeDA	376-06-7	2.22 U	0.70	2.22	5.56
NMeFOSAA	2355-31-9	2.78 U	1.24	2.78	5.56
NEtFOSAA	2991-50-6	2.22 U	0.63	2.22	5.56
PFBS	375-73-5	1.11 ~~0.82 J~~ U	0.40	1.11	5.56
PFHxS	355-46-4	52.67	0.24	0.56	5.56
PFOS	1763-23-1	1365.15 Ø	5.00	18.52	92.59

EBL

Surrogate Recoveries (%)

13C5-PFHxA	131
13C4-PFHpA	123
13C8-PFOA	114
13C9-PFNA	95
13C6-PFDA	130
13C7-PFUnA	129
13C2-PFDoA	114
13C2-PFTeDA	116
d3-MeFOSAA	103 Ø
d5-EtFOSAA	132 Ø
13C3-PFBS	97 Ø
13C3-PFHxS	97 Ø
13C8-PFOS	147

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15

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

Client ID		VC-AOC16-SB02-0102			
Battelle ID		J8407-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		9.75			
Matrix		SB			
Sample Size		1.830			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	14.94	0.36	1.09	5.46
PFHpA	375-85-9	4.68 J	0.48	1.09	5.46
PFOA	335-67-1	33.53	0.55	1.09	5.46
PFNA	375-95-1	1.30 J	0.47	1.09	5.46
PFDA	335-76-2	1.09 U	0.30	1.09	5.46
PFUnA	2058-94-8	1.09 U	0.45	1.09	5.46
PFDoA	307-55-1	0.55 U	0.26	0.55	5.46
PFTrDA	72629-94-8	1.09 U	0.31	1.09	5.46
PFTeDA	376-06-7	2.19 U	0.69	2.19	5.46
NMeFOSAA	2355-31-9	2.73 U	1.22	2.73	5.46
NEtFOSAA	2991-50-6	2.19 U	0.62	2.19	5.46
PFBS	375-73-5	1.39 J U	0.39	1.09	5.46
PFHxS	355-46-4	117.52 Ø	0.48	1.09	10.93
PFOS	1763-23-1	834.11 Ø	3.69	13.66	68.31
Surrogate Recoveries (%)					
13C5-PFHxA		127			
13C4-PFHpA		127			
13C8-PFOA		113			
13C9-PFNA		110			
13C6-PFDA		133			
13C7-PFUnA		124			
13C2-PFDoA		123			
13C2-PFTeDA		120			
d3-MeFOSAA		126 Ø			
d5-EtFOSAA		128 Ø			
13C3-PFBS		122 Ø			
13C3-PFHxS		135 Ø			
13C8-PFOS		136			

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16

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

Client ID		VC-AOC16-SB02-0506			
Battelle ID		J8408-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		19.28			
Matrix		SB			
Sample Size		1.630			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	38.14	0.40	1.23	6.13
PFHpA	375-85-9	3.15 J	0.54	1.23	6.13
PFOA	335-67-1	1.16 J	0.61	1.23	6.13
PFNA	375-95-1	1.23 U	0.53	1.23	6.13
PFDA	335-76-2	1.23 U	0.33	1.23	6.13
PFUnA	2058-94-8	1.23 U	0.50	1.23	6.13
PFDoA	307-55-1	0.61 U	0.29	0.61	6.13
PFTrDA	72629-94-8	1.23 U	0.34	1.23	6.13
PFTeDA	376-06-7	2.45 U	0.77	2.45	6.13
NMeFOSAA	2355-31-9	3.07 U	1.37	3.07	6.13
NEtFOSAA	2991-50-6	2.45 U	0.70	2.45	6.13
PFBS	375-73-5	9.69	0.44	1.23	6.13
PFHxS	355-46-4	9.40	0.27	0.61	6.13
PFOS	1763-23-1	20.63	0.33	1.23	6.13

Surrogate Recoveries (%)

13C5-PFHxA	115
13C4-PFHpA	115
13C8-PFOA	116
13C9-PFNA	116
13C6-PFDA	116
13C7-PFUnA	133
13C2-PFDoA	114
13C2-PFTeDA	114
d3-MeFOSAA	105
d5-EtFOSAA	113
13C3-PFBS	116
13C3-PFHxS	106
13C8-PFOS	119

NW 12/28/18

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17

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

Client ID	VC-AOC16-SS03-000H				
Battelle ID	J8409-FS				
Sample Type	SA				
Collection Date	09/25/2018				
Extraction Date	10/02/2018				
Analysis Date	10/14/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	9.77				
Matrix	SS				
Sample Size	1.810				
Size Unit-Basis	g				
Units	ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	6.47	0.36	1.10	5.52
PFHpA	375-85-9	1.95 J	0.49	1.10	5.52
PFOA	335-67-1	6.32	0.55	1.10	5.52
PFNA	375-95-1	0.59 J	0.48	1.10	5.52
PFDA	335-76-2	0.81 J	0.30	1.10	5.52
PFUnA	2058-94-8	1.10 U	0.45	1.10	5.52
PFDoA	307-55-1	0.55 U	0.27	0.55	5.52
PFTrDA	72629-94-8	1.10 U	0.31	1.10	5.52
PFTeDA	376-06-7	2.21 U	0.70	2.21	5.52
NMeFOSAA	2355-31-9	2.76 U	1.24	2.76	5.52
NEtFOSAA	2991-50-6	2.21 U	0.63	2.21	5.52
PFBS	375-73-5	1.10 ~~0.54 J~~ U	0.40	1.10	5.52
PFHxS	355-46-4	56.63	0.24	0.55	5.52
PFOS	1763-23-1	941.73 Ø	3.73	13.81	69.06

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Surrogate Recoveries (%)

13C5-PFHxA	134
13C4-PFHpA	130
13C8-PFOA	126
13C9-PFNA	106
13C6-PFDA	121
13C7-PFUnA	124
13C2-PFDoA	124
13C2-PFTeDA	117
d3-MeFOSAA	116 Ø
d5-EtFOSAA	127 Ø
13C3-PFBS	105 Ø
13C3-PFHxS	105 Ø
13C8-PFOS	118

NW 12/28/18

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18

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

Client ID		VC-AOC16-SB03-0102			
Battelle ID		J8410-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		11.65			
Matrix		SB			
Sample Size		1.820			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	7.09	0.36	1.10	5.49
PFHpA	375-85-9	1.86 J	0.48	1.10	5.49
PFOA	335-67-1	5.22 J	0.55	1.10	5.49
PFNA	375-95-1	1.10 U	0.47	1.10	5.49
PFDA	335-76-2	1.10 U	0.30	1.10	5.49
PFUnA	2058-94-8	1.10 U	0.45	1.10	5.49
PFDoA	307-55-1	0.55 U	0.26	0.55	5.49
PFTrDA	72629-94-8	1.10 U	0.31	1.10	5.49
PFTeDA	376-06-7	2.20 U	0.69	2.20	5.49
NMeFOSAA	2355-31-9	2.75 U	1.23	2.75	5.49
NEtFOSAA	2991-50-6	2.20 U	0.63	2.20	5.49
PFBS	375-73-5	1.10 U	0.40	1.10	5.49
PFHxS	355-46-4	26.66	0.24	0.55	5.49
PFOS	1763-23-1	651.49 D	3.71	13.74	68.68
Surrogate Recoveries (%)					
13C5-PFHxA		119			
13C4-PFHpA		112			
13C8-PFOA		122			
13C9-PFNA		102			
13C6-PFDA		127			
13C7-PFUnA		129			
13C2-PFDoA		111			
13C2-PFTeDA		110			
d3-MeFOSAA		112			
d5-EtFOSAA		110			
13C3-PFBS		99			
13C3-PFHxS		109			
13C8-PFOS		121			

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19

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

Client ID		VC-AOC16-SB03-0506			
Battelle ID		J8411-FS			
Sample Type		SA			
Collection Date		09/25/2018			
Extraction Date		10/02/2018			
Analysis Date		10/14/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		19.60			
Matrix		SB			
Sample Size		1.640			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	14.21	0.40	1.22	6.10
PFHpA	375-85-9	2.77 J	0.54	1.22	6.10
PFOA	335-67-1	44.68	0.61	1.22	6.10
PFNA	375-95-1	1.22 U	0.52	1.22	6.10
PFDA	335-76-2	1.22 U	0.33	1.22	6.10
PFUnA	2058-94-8	1.22 U	0.50	1.22	6.10
PFDoA	307-55-1	0.61 U	0.29	0.61	6.10
PFTrDA	72629-94-8	1.22 U	0.34	1.22	6.10
PFTeDA	376-06-7	2.44 U	0.77	2.44	6.10
NMeFOSAA	2355-31-9	3.05 U	1.37	3.05	6.10
NEtFOSAA	2991-50-6	2.44 U	0.70	2.44	6.10
PFBS	375-73-5	3.54 U	0.44	1.22	6.10 EBL
PFHxS	355-46-4	8.55	0.27	0.61	6.10
PFOS	1763-23-1	1.22 ~~0.90 J~~ U	0.33	1.22	6.10 EBL

Surrogate Recoveries (%)

13C5-PFHxA	109
13C4-PFHpA	104
13C8-PFOA	105
13C9-PFNA	109
13C6-PFDA	116
13C7-PFUnA	122
13C2-PFDoA	110
13C2-PFTeDA	108
d3-MeFOSAA	93
d5-EtFOSAA	106
13C3-PFBS	116
13C3-PFHxS	120
13C8-PFOS	121

MW 12/28/18

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-PM64B-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0585	6228824.4	1864050.3	Perfluoroalkyl Compounds	VC-PM64B-SB03-0506	SBS	Sub-surface soil (> 6)	24-Sep-18