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 18-0584

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 18-0584

Package DP-18-0289

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 18-0584

Package DP-18-0289

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

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

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

Analyst Approval: Lauren Griffith — Digitally signed by Lauren Griffith, DN: cn=Lauren Griffith, o=Battelle, ou, email=griffithl@battelle.org, c=US, Date: 2018.10.09 14:11:15 -04'00'

QC Chemist Approval: Carla Devine — Digitally signed by devinec@battelle.org, DN: cn=devinec@battelle.org, Date: 2018.10.18 10:40:28 -04'00'

Project Manager Approval: — Digitally signed by Jonathan Thorn, Date: 2018.10.19 15:41:23 -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 18-0584

Package DP-18-0289

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

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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: 18-0584
Project/Site: Naval Base Ventura County
CTO: 4164

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CR892PB-FS	180507-02: Ottawa Sand	SEDIMENT	10/2/2018	10/2/2018
CR893LCS-FS	180507-02: Ottawa Sand	SEDIMENT	10/2/2018	10/2/2018
J8352-FS	VC-PM323-SS01-000H	SS	9/24/2018	9/27/2018
J8353-FS	VC-PM323-SB01-0102	SB	9/24/2018	9/27/2018
J8354-FS	VC-PM323-SB01-0506	SB	9/24/2018	9/27/2018
J8355-FS	VC-PM323-SS03-000H	SS	9/24/2018	9/27/2018
J8356-FS	VC-PM323-SB03-0102	SB	9/24/2018	9/27/2018
J8357-FS	VC-PM323-SB03-0506	SB	9/24/2018	9/27/2018
J8360-FS	VC-PM324-SS01-000H	SS	9/24/2018	9/27/2018
J8361-FS	VC-PM324-SB01-0102	SB	9/24/2018	9/27/2018
J8362-FS	VC-PM324-SB01-0506	SB	9/24/2018	9/27/2018
J8363-FS	VC-PM324-SS03-000H	SS	9/24/2018	9/27/2018
J8364-FS	VC-PM324-SB03-0102	SB	9/24/2018	9/27/2018
J8365-FS	VC-PM324-SB03-0506	SB	9/24/2018	9/27/2018
J8366MS-FS	VC-PM324-SB03-0102-MS	SB	9/24/2018	9/27/2018
J8367MSD-FS	VC-PM324-SB03-0102-MSD	SB	9/24/2018	9/27/2018
J8373-FS	VC-PM64B-SS01-000H	SS	9/24/2018	9/27/2018
J8374-FS	VC-PM64B-SB01-0102	SB	9/24/2018	9/27/2018
J8375-FS	VC-PM64B-SB01-0506	SB	9/24/2018	9/27/2018
J8376-FS	VC-PM64B-SS02-000H	SS	9/24/2018	9/27/2018
J8377-FS	VC-PM64B-SB02-0102	SB	9/24/2018	9/27/2018
J8378-FS	VC-PM64B-SB02-0506	SB	9/24/2018	9/27/2018
J8379-FS	VC-PM64B-SS03-000H	SS	9/24/2018	9/27/2018
J8380-FS	VC-PM64B-SB03-0102	SB	9/24/2018	9/27/2018

Miscellaneous Documentation

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QA/QC Summary
Batch 18-0584

Project:	CTO-4164 Naval Base Ventura County, California
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SS, SB
Data Set:	DP-18-0289
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	None.
Analysis	PFAS were measured by liquid chromatography tandem mass spectrometry (LC-MS/MS) in the multiple reaction monitoring (MRM). An initial calibration consisting of representative target analytes, labelled analogs, and internal standards was analyzed prior to analysis to demonstrate the linear range of analysis. Calibration verification was performed at the beginning and end of 10 injections and at the end of each sequence. Target PFAS were quantified using the isotope dilution method. Samples are reported in ng/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	10/8-9/2018

QA/QC Summary
Batch 18-0584

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	1 exceedance noted.
	PFOS failed RSD criteria between the MS and MSD samples, the concentration of PFOS in the background sample was 2.5 higher than the amount fortified into the MS/MSD samples.

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.
	There are six (6) instances where 13C2-PFOA and 13C4-PFOS would fail IS area criteria. These failures are due to the amount of native PFOA and PFOS found in the samples interfering with the internal standards in the non-diluted extracts. In these cases, the extracted internal standards that would use these two internal standards are reported from a dilution to mitigate the interferences from the high concentrations in the non-diluted samples. No data is reported from extracts where the IS areas would have failed criteria.

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 18-0584

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: 18-0584
Data Set: DP-18-0289
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	1	The concentration of PFOS in the backround was approximately 2.5 times the fortification amount. Individual recoveries were acceptable. LMG 10/9/18
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-18-0289
Project Number:	100110125-01	**Prep Batch Number:**	18-0584
Entered By:	Lauren Griffith	**Entered On:**	10/09/2018
Test Code (Matrix Type):	Master_369(S)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
LMG 10/9/18

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.
LMG 10/9/18

There are six instances of extracted internal standards (surrogates) that would fall outside of the 50%-150% recovery criteria if reported from the non-diluted extract. This is due to the higher levels of native PFOA and PFOS found in the samples interfering with the 13C2-PFOA and 13C4-PFOS internal standards used to quantify the surrogates. In these cases, the surrogates are reported from dilutions, however, the native compounds are reported from the non-diluted extracts as the interferences are with the internal standards and not the surrogates used to quantify the native compounds.
LMG 10/9/18

Task Leader Approval:

SupervisorApproval:

PM Approval:



Digitally signed by Jonathan Thorn
Date: 2018.10.09 14:45:19 -04'00'

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batch: 18-0584
Data Set: DP-18-0289

		CR892PB-FS (180507-02: Ottawa Sand)	CR893LCS-FS (180507-02: Ottawa Sand)	J8366MS-FS (VC-PM324-SB03-0102-MS)	J8367MSD-FS (VC-PM324-SB03-0102-MSD)	J8352-FS (VC-PM323-SS01-000H)	J8353-FS (VC-PM323-SB01-0102)	J8354-FS (VC-PM323-SB01-0506)	J8355-FS (VC-PM323-SS03-000H)
PFHxA	307-24-4	-	L	L	L	L	L	L	-
PFHpA	375-85-9	-	L	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	-	-	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/Br

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

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

	J8356-FS (VC-PM323-SB03-0102)	J8357-FS (VC-PM323-SB03-0506)	J8360-FS (VC-PM324-SS01-000H)	J8361-FS (VC-PM324-SB01-0102)	J8362-FS (VC-PM324-SB01-0506)	J8363-FS (VC-PM324-SS03-000H)	J8364-FS (VC-PM324-SB03-0102)	J8365-FS (VC-PM324-SB03-0506)
PFHxA	-	-	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	-	-	-	-
PFHxS	L/Br	L/Br	-	-	-	-	-	-
PFOS	L/Br	-	-	-	-	L/Br	L/Br	-

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

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

	J8373-FS (VC-PM64B-SS01-000H)	J8374-FS (VC-PM64B-SB01-0102)	J8375-FS (VC-PM64B-SB01-0506)	J8376-FS (VC-PM64B-SS02-000H)	J8377-FS (VC-PM64B-SB02-0102)	J8378-FS (VC-PM64B-SB02-0506)	J8379-FS (VC-PM64B-SS03-000H)	J8380-FS (VC-PM64B-SB03-0102)
PFHxA	-	-	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	-	-	-	-
PFHxS	-	-	-	-	-	L/Br	-	-
PFOS	-	L/Br	-	L/Br	L/Br	L/Br	L/Br	L/Br

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

ACCREDITATIONS

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

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

Custody Records

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

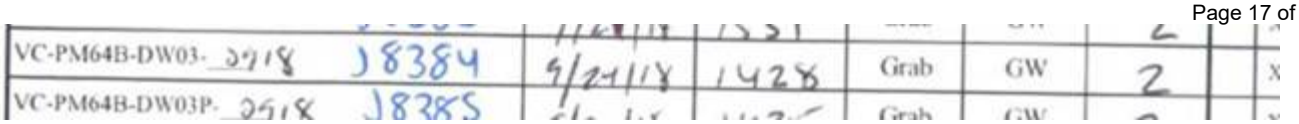
Hi Tiffany,

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

	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
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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)			

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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:
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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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.	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		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.	Analysis: 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:	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	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	Normal X Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 4 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	
~~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:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Normal ☒ Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 6 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-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
Tiffany Hill
1100 NE Circle Blvd, Suite 300
Corvallis, OR
97330

Project Manager: Eric Davis
Sampler Information (print name): V. Kilbut
Phone: 724-977-3628
Email:

Turnaround Time (TAT) Requested:
Normal ☒
Priority ☐
RUSH ☐

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

Sampling Site: HS09
Site Information:
COC #: 3
Page#: 9 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: 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	Jacobs	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

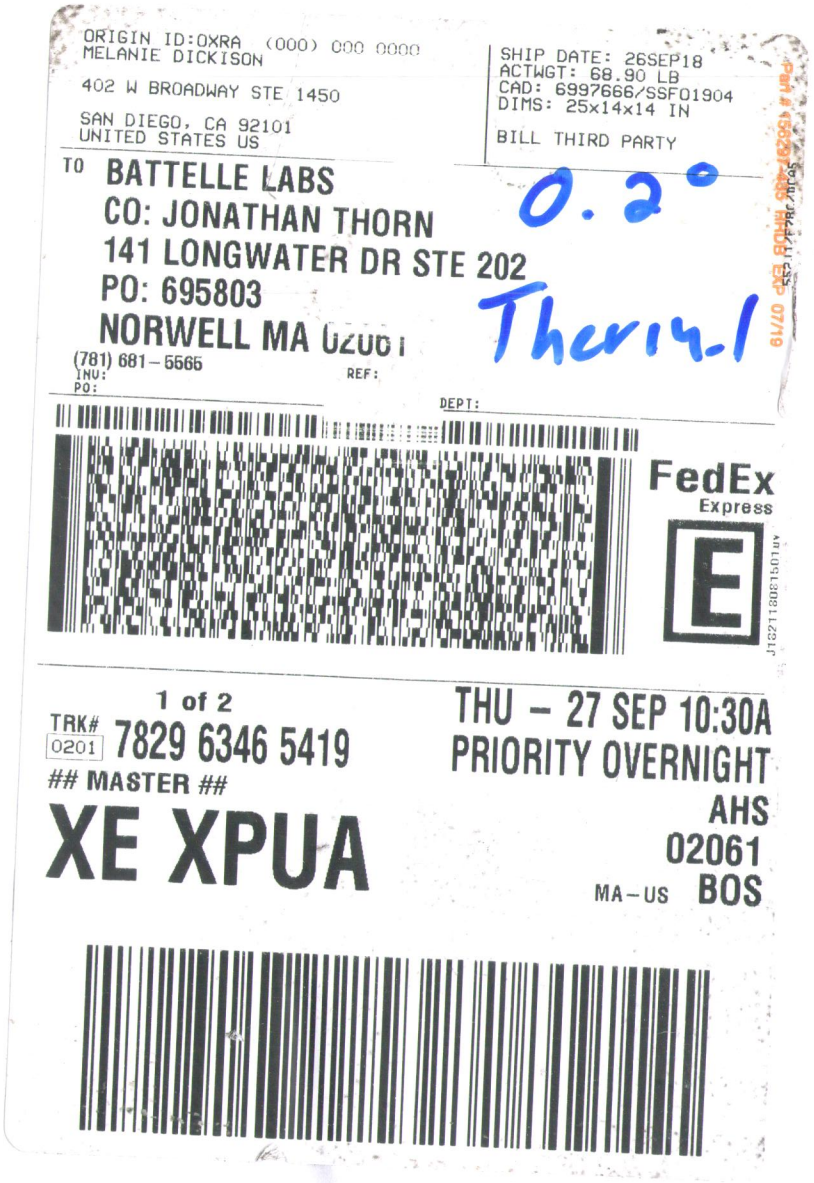
Client Contact Information	Project Manager: Eric Davis	Sampling Site: AOC 16	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Turnaround Time (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-PM323-SS01-000H				
Battelle ID		J8352-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		5.47				
Matrix		SS				
Sample Size		1.95				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	67.30		0.34	1.03	5.13
PFHpA	375-85-9	12.19		0.45	1.03	5.13
PFOA	335-67-1	13.05		0.51	1.03	5.13
PFNA	375-95-1	2.88	J	0.44	1.03	5.13
PFDA	335-76-2	4.42	J	0.28	1.03	5.13
PFUnA	2058-94-8	0.98	J	0.42	1.03	5.13
PFDoA	307-55-1	0.33	J	0.25	0.51	5.13
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.13
PFTeDA	376-06-7	2.05	U	0.65	2.05	5.13
NMeFOSAA	2355-31-9	2.56	U	1.15	2.56	5.13
NEtFOSAA	2991-50-6	2.05	U	0.58	2.05	5.13
PFBS	375-73-5	1.86	J	0.37	1.03	5.13
PFHxS	355-46-4	38.32		0.23	0.51	5.13
PFOS	1763-23-1	811.42	D	2.77	10.26	51.28

Surrogate Recoveries (%)

13C5-PFHxA	132	
13C4-PFHpA	129	
13C8-PFOA	108	
13C9-PFNA	90	
13C6-PFDA	120	
13C7-PFUnA	122	D
13C2-PFDoA	107	D
13C2-PFTeDA	111	D
d3-MeFOSAA	123	
d5-EtFOSAA	149	
13C3-PFBS	149	
13C3-PFHxS	146	
13C8-PFOS	95	D

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

Client ID		VC-PM323-SB01-0102				
Battelle ID		J8353-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		7.31				
Matrix		SB				
Sample Size		1.92				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	25.93		0.34	1.04	5.21
PFHpA	375-85-9	5.33		0.46	1.04	5.21
PFOA	335-67-1	16.34		0.52	1.04	5.21
PFNA	375-95-1	5.12	J	0.45	1.04	5.21
PFDA	335-76-2	1.70	J	0.28	1.04	5.21
PFUnA	2058-94-8	1.04	U	0.43	1.04	5.21
PFDoA	307-55-1	0.52	U	0.25	0.52	5.21
PFTrDA	72629-94-8	1.04	U	0.29	1.04	5.21
PFTeDA	376-06-7	2.08	U	0.66	2.08	5.21
NMeFOSAA	2355-31-9	2.60	U	1.17	2.60	5.21
NEtFOSAA	2991-50-6	2.08	U	0.59	2.08	5.21
PFBS	375-73-5	3.48	J	0.38	1.04	5.21
PFHxS	355-46-4	52.28		0.23	0.52	5.21
PFOS	1763-23-1	777.60	D	2.81	10.42	52.08

Surrogate Recoveries (%)

13C5-PFHxA	109	
13C4-PFHpA	110	
13C8-PFOA	100	
13C9-PFNA	91	
13C6-PFDA	124	
13C7-PFUnA	146	
13C2-PFDoA	126	
13C2-PFTeDA	125	
d3-MeFOSAA	135	
d5-EtFOSAA	146	
13C3-PFBS	131	
13C3-PFHxS	145	
13C8-PFOS	87	D

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

Client ID		VC-PM323-SB01-0506				
Battelle ID		J8354-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		6.93				
Matrix		SB				
Sample Size		1.82				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	27.34		0.36	1.10	5.49
PFHpA	375-85-9	3.27	J	0.48	1.10	5.49
PFOA	335-67-1	13.53		0.55	1.10	5.49
PFNA	375-95-1	1.10	U	0.47	1.10	5.49
PFDA	335-76-2	3.26	J	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	6.28		0.40	1.10	5.49
PFHxS	355-46-4	27.94		0.24	0.55	5.49
PFOS	1763-23-1	769.46	D	2.97	10.99	54.95

Surrogate Recoveries (%)

13C5-PFHxA	120	
13C4-PFHpA	119	
13C8-PFOA	103	
13C9-PFNA	80	
13C6-PFDA	108	
13C7-PFUnA	113	D
13C2-PFDoA	104	D
13C2-PFTeDA	105	D
d3-MeFOSAA	132	
d5-EtFOSAA	139	
13C3-PFBS	145	
13C3-PFHxS	148	
13C8-PFOS	101	D

BATTELLE
It can be done

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

Client ID		VC-PM323-SS03-000H				
Battelle ID		J8355-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		4.79				
Matrix		SS				
Sample Size		1.94				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.03	U	0.34	1.03	5.15
PFHpA	375-85-9	1.03	U	0.45	1.03	5.15
PFOA	335-67-1	1.03	U	0.52	1.03	5.15
PFNA	375-95-1	1.03	U	0.44	1.03	5.15
PFDA	335-76-2	1.03	U	0.28	1.03	5.15
PFUnA	2058-94-8	1.03	U	0.42	1.03	5.15
PFDoA	307-55-1	0.52	U	0.25	0.52	5.15
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.15
PFTeDA	376-06-7	2.06	U	0.65	2.06	5.15
NMeFOSAA	2355-31-9	2.58	U	1.15	2.58	5.15
NEtFOSAA	2991-50-6	2.06	U	0.59	2.06	5.15
PFBS	375-73-5	1.03	U	0.37	1.03	5.15
PFHxS	355-46-4	5.05	J	0.23	0.52	5.15
PFOS	1763-23-1	42.65		0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	105
13C4-PFHpA	104
13C8-PFOA	115
13C9-PFNA	97
13C6-PFDA	107
13C7-PFUnA	109
13C2-PFDoA	99
13C2-PFTeDA	95
d3-MeFOSAA	76
d5-EtFOSAA	101
13C3-PFBS	119
13C3-PFHxS	115
13C8-PFOS	115

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

Client ID		VC-PM323-SB03-0102			
Battelle ID		J8356-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/08/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		4.54			
Matrix		SB			
Sample Size		1.97			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.08
PFHpA	375-85-9	1.02 U	0.45	1.02	5.08
PFOA	335-67-1	1.02 U	0.51	1.02	5.08
PFNA	375-95-1	1.02 U	0.44	1.02	5.08
PFDA	335-76-2	1.02 U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.08
PFDoA	307-55-1	0.51 U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02 U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03 U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54 U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03 U	0.58	2.03	5.08
PFBS	375-73-5	1.02 U	0.37	1.02	5.08
PFHxS	355-46-4	5.39	0.22	0.51	5.08
PFOS	1763-23-1	35.69	0.27	1.02	5.08

Surrogate Recoveries (%)

13C5-PFHxA	105
13C4-PFHpA	104
13C8-PFOA	104
13C9-PFNA	102
13C6-PFDA	106
13C7-PFUnA	114
13C2-PFDoA	98
13C2-PFTeDA	99
d3-MeFOSAA	112
d5-EtFOSAA	121
13C3-PFBS	121
13C3-PFHxS	122
13C8-PFOS	126

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

Client ID		VC-PM323-SB03-0506			
Battelle ID		J8357-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/08/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		6.98			
Matrix		SB			
Sample Size		1.90			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.05 U	0.35	1.05	5.26
PFHpA	375-85-9	1.05 U	0.46	1.05	5.26
PFOA	335-67-1	1.05 U	0.53	1.05	5.26
PFNA	375-95-1	1.05 U	0.45	1.05	5.26
PFDA	335-76-2	1.05 U	0.28	1.05	5.26
PFUnA	2058-94-8	1.05 U	0.43	1.05	5.26
PFDoA	307-55-1	0.53 U	0.25	0.53	5.26
PFTrDA	72629-94-8	1.05 U	0.29	1.05	5.26
PFTeDA	376-06-7	2.11 U	0.66	2.11	5.26
NMeFOSAA	2355-31-9	2.63 U	1.18	2.63	5.26
NEtFOSAA	2991-50-6	2.11 U	0.60	2.11	5.26
PFBS	375-73-5	1.05 U	0.38	1.05	5.26
PFHxS	355-46-4	6.93	0.23	0.53	5.26
PFOS	1763-23-1	4.72 J	0.28	1.05	5.26

Surrogate Recoveries (%)

13C5-PFHxA	113
13C4-PFHpA	110
13C8-PFOA	115
13C9-PFNA	109
13C6-PFDA	115
13C7-PFUnA	122
13C2-PFDoA	112
13C2-PFTeDA	112
d3-MeFOSAA	105
d5-EtFOSAA	115
13C3-PFBS	107
13C3-PFHxS	121
13C8-PFOS	101

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

Client ID		VC-PM324-SS01-000H			
Battelle ID		J8360-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		8.28			
Matrix		SS			
Sample Size		1.91			
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	1.05 U	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	0.47 J	0.28	1.05	5.24

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	105
13C8-PFOA	114
13C9-PFNA	107
13C6-PFDA	117
13C7-PFUnA	128
13C2-PFDoA	117
13C2-PFTeDA	117
d3-MeFOSAA	102
d5-EtFOSAA	102
13C3-PFBS	97
13C3-PFHxS	109
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-PM324-SB01-0102			
Battelle ID		J8361-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		5.98			
Matrix		SB			
Sample Size		1.82			
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	0.55 U	0.24	0.55	5.49
PFOS	1763-23-1	0.34 J	0.30	1.10	5.49

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	105
13C8-PFOA	104
13C9-PFNA	99
13C6-PFDA	112
13C7-PFUnA	121
13C2-PFDoA	102
13C2-PFTeDA	107
d3-MeFOSAA	124
d5-EtFOSAA	131
13C3-PFBS	121
13C3-PFHxS	122
13C8-PFOS	115

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

Client ID		VC-PM324-SB01-0506			
Battelle ID		J8362-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		7.80			
Matrix		SB			
Sample Size		1.87			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.07 U	0.35	1.07	5.35
PFHpA	375-85-9	1.07 U	0.47	1.07	5.35
PFOA	335-67-1	1.07 U	0.53	1.07	5.35
PFNA	375-95-1	1.07 U	0.46	1.07	5.35
PFDA	335-76-2	1.07 U	0.29	1.07	5.35
PFUnA	2058-94-8	1.07 U	0.44	1.07	5.35
PFDoA	307-55-1	0.53 U	0.26	0.53	5.35
PFTrDA	72629-94-8	1.07 U	0.30	1.07	5.35
PFTeDA	376-06-7	2.14 U	0.67	2.14	5.35
NMeFOSAA	2355-31-9	2.67 U	1.20	2.67	5.35
NEtFOSAA	2991-50-6	2.14 U	0.61	2.14	5.35
PFBS	375-73-5	1.07 U	0.39	1.07	5.35
PFHxS	355-46-4	0.53 U	0.24	0.53	5.35
PFOS	1763-23-1	0.48 J	0.29	1.07	5.35

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	97
13C8-PFOA	111
13C9-PFNA	107
13C6-PFDA	119
13C7-PFUnA	130
13C2-PFDoA	112
13C2-PFTeDA	104
d3-MeFOSAA	126
d5-EtFOSAA	132
13C3-PFBS	115
13C3-PFHxS	106
13C8-PFOS	107

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

Client ID		VC-PM324-SS03-000H				
Battelle ID		J8363-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		1.64				
Matrix		SS				
Sample Size		2.00				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	3.24	J	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	1.71	J	0.22	0.50	5.00
PFOS	1763-23-1	39.59		0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	92
13C4-PFHpA	93
13C8-PFOA	104
13C9-PFNA	92
13C6-PFDA	111
13C7-PFUnA	126
13C2-PFDoA	109
13C2-PFTeDA	109
d3-MeFOSAA	99
d5-EtFOSAA	115
13C3-PFBS	118
13C3-PFHxS	124
13C8-PFOS	114

BATTELLE
It can be done

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

Client ID		VC-PM324-SB03-0102			
Battelle ID		J8364-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		3.28			
Matrix		SB			
Sample Size		1.90			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.23 J	0.35	1.05	5.26
PFHpA	375-85-9	1.05 U	0.46	1.05	5.26
PFOA	335-67-1	0.67 J	0.53	1.05	5.26
PFNA	375-95-1	0.57 J	0.45	1.05	5.26
PFDA	335-76-2	1.05 U	0.28	1.05	5.26
PFUnA	2058-94-8	1.05 U	0.43	1.05	5.26
PFDoA	307-55-1	0.53 U	0.25	0.53	5.26
PFTrDA	72629-94-8	1.05 U	0.29	1.05	5.26
PFTeDA	376-06-7	2.11 U	0.66	2.11	5.26
NMeFOSAA	2355-31-9	2.63 U	1.18	2.63	5.26
NEtFOSAA	2991-50-6	2.11 U	0.60	2.11	5.26
PFBS	375-73-5	1.05 U	0.38	1.05	5.26
PFHxS	355-46-4	2.76 J	0.23	0.53	5.26
PFOS	1763-23-1	216.54 D	1.42	5.26	26.32

Surrogate Recoveries (%)

13C5-PFHxA	113
13C4-PFHpA	105
13C8-PFOA	118
13C9-PFNA	99
13C6-PFDA	114
13C7-PFUnA	117
13C2-PFDoA	104
13C2-PFTeDA	106
d3-MeFOSAA	107
d5-EtFOSAA	128
13C3-PFBS	117
13C3-PFHxS	125
13C8-PFOS	88 D

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

Client ID		VC-PM324-SB03-0506			
Battelle ID		J8365-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.35			
Matrix		SB			
Sample Size		1.58			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.27 U	0.42	1.27	6.33
PFHpA	375-85-9	1.27 U	0.56	1.27	6.33
PFOA	335-67-1	1.27 U	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	1.27 U	0.46	1.27	6.33
PFHxS	355-46-4	1.16 J	0.28	0.63	6.33
PFOS	1763-23-1	4.26 J	0.34	1.27	6.33

Surrogate Recoveries (%)

13C5-PFHxA	98
13C4-PFHpA	103
13C8-PFOA	115
13C9-PFNA	104
13C6-PFDA	108
13C7-PFUnA	113
13C2-PFDoA	106
13C2-PFTeDA	103
d3-MeFOSAA	110
d5-EtFOSAA	137
13C3-PFBS	111
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-PM64B-SS01-000H			
Battelle ID		J8373-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.77			
Matrix		SS			
Sample Size		1.99			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.01 U	0.33	1.01	5.03
PFHpA	375-85-9	1.01 U	0.44	1.01	5.03
PFOA	335-67-1	1.01 U	0.50	1.01	5.03
PFNA	375-95-1	1.01 U	0.43	1.01	5.03
PFDA	335-76-2	1.01 U	0.27	1.01	5.03
PFUnA	2058-94-8	1.01 U	0.41	1.01	5.03
PFDoA	307-55-1	0.50 U	0.24	0.50	5.03
PFTrDA	72629-94-8	1.01 U	0.28	1.01	5.03
PFTeDA	376-06-7	2.01 U	0.63	2.01	5.03
NMeFOSAA	2355-31-9	2.51 U	1.13	2.51	5.03
NEtFOSAA	2991-50-6	2.01 U	0.57	2.01	5.03
PFBS	375-73-5	1.01 U	0.36	1.01	5.03
PFHxS	355-46-4	0.27 J	0.22	0.50	5.03
PFOS	1763-23-1	2.34 J	0.27	1.01	5.03

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	102
13C8-PFOA	110
13C9-PFNA	100
13C6-PFDA	110
13C7-PFUnA	124
13C2-PFDoA	114
13C2-PFTeDA	107
d3-MeFOSAA	124
d5-EtFOSAA	137
13C3-PFBS	119
13C3-PFHxS	128
13C8-PFOS	121

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

Client ID		VC-PM64B-SB01-0102			
Battelle ID		J8374-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		4.27			
Matrix		SB			
Sample Size		1.97			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.08
PFHpA	375-85-9	1.02 U	0.45	1.02	5.08
PFOA	335-67-1	1.02 U	0.51	1.02	5.08
PFNA	375-95-1	1.02 U	0.44	1.02	5.08
PFDA	335-76-2	1.02 U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.08
PFDoA	307-55-1	0.51 U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02 U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03 U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54 U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03 U	0.58	2.03	5.08
PFBS	375-73-5	1.02 U	0.37	1.02	5.08
PFHxS	355-46-4	0.51 U	0.22	0.51	5.08
PFOS	1763-23-1	11.48	0.27	1.02	5.08

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	113
13C8-PFOA	118
13C9-PFNA	107
13C6-PFDA	105
13C7-PFUnA	115
13C2-PFDoA	103
13C2-PFTeDA	102
d3-MeFOSAA	110
d5-EtFOSAA	129
13C3-PFBS	114
13C3-PFHxS	119
13C8-PFOS	123

BATTELLE
It can be done

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

Client ID		VC-PM64B-SB01-0506			
Battelle ID		J8375-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.93			
Matrix		SB			
Sample Size		1.59			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.26 U	0.42	1.26	6.29
PFHpA	375-85-9	1.26 U	0.55	1.26	6.29
PFOA	335-67-1	1.26 U	0.63	1.26	6.29
PFNA	375-95-1	1.26 U	0.54	1.26	6.29
PFDA	335-76-2	1.26 U	0.34	1.26	6.29
PFUnA	2058-94-8	1.26 U	0.52	1.26	6.29
PFDoA	307-55-1	0.63 U	0.30	0.63	6.29
PFTrDA	72629-94-8	1.26 U	0.35	1.26	6.29
PFTeDA	376-06-7	2.52 U	0.79	2.52	6.29
NMeFOSAA	2355-31-9	3.14 U	1.41	3.14	6.29
NEtFOSAA	2991-50-6	2.52 U	0.72	2.52	6.29
PFBS	375-73-5	1.26 U	0.45	1.26	6.29
PFHxS	355-46-4	0.38 J	0.28	0.63	6.29
PFOS	1763-23-1	0.76 J	0.34	1.26	6.29

Surrogate Recoveries (%)

13C5-PFHxA	96
13C4-PFHpA	98
13C8-PFOA	104
13C9-PFNA	99
13C6-PFDA	112
13C7-PFUnA	123
13C2-PFDoA	110
13C2-PFTeDA	109
d3-MeFOSAA	118
d5-EtFOSAA	125
13C3-PFBS	115
13C3-PFHxS	107
13C8-PFOS	113

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

Client ID		VC-PM64B-SS02-000H			
Battelle ID		J8376-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		8.50			
Matrix		SS			
Sample Size		1.84			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	2.19 J	0.36	1.09	5.43
PFHpA	375-85-9	1.00 J	0.48	1.09	5.43
PFOA	335-67-1	1.72 J	0.54	1.09	5.43
PFNA	375-95-1	1.09 U	0.47	1.09	5.43
PFDA	335-76-2	0.33 J	0.29	1.09	5.43
PFUnA	2058-94-8	1.09 U	0.45	1.09	5.43
PFDoA	307-55-1	0.54 U	0.26	0.54	5.43
PFTrDA	72629-94-8	1.09 U	0.30	1.09	5.43
PFTeDA	376-06-7	2.17 U	0.68	2.17	5.43
NMeFOSAA	2355-31-9	2.72 U	1.22	2.72	5.43
NEtFOSAA	2991-50-6	2.17 U	0.62	2.17	5.43
PFBS	375-73-5	0.65 J	0.39	1.09	5.43
PFHxS	355-46-4	3.07 J	0.24	0.54	5.43
PFOS	1763-23-1	17.56	0.29	1.09	5.43

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	110
13C8-PFOA	119
13C9-PFNA	111
13C6-PFDA	128
13C7-PFUnA	132
13C2-PFDoA	131
13C2-PFTeDA	126
d3-MeFOSAA	122
d5-EtFOSAA	141
13C3-PFBS	132
13C3-PFHxS	146
13C8-PFOS	132

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

Client ID		VC-PM64B-SB02-0102				
Battelle ID		J8377-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		15.57				
Matrix		SB				
Sample Size		1.63				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.54	J	0.40	1.23	6.13
PFHpA	375-85-9	0.84	J	0.54	1.23	6.13
PFOA	335-67-1	1.35	J	0.61	1.23	6.13
PFNA	375-95-1	0.65	J	0.53	1.23	6.13
PFDA	335-76-2	1.01	J	0.33	1.23	6.13
PFUnA	2058-94-8	1.23	U	0.50	1.23	6.13
PFDoA	307-55-1	0.43	J	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	1.23	U	0.44	1.23	6.13
PFHxS	355-46-4	2.53	J	0.27	0.61	6.13
PFOS	1763-23-1	17.97		0.33	1.23	6.13

Surrogate Recoveries (%)

13C5-PFHxA	115
13C4-PFHpA	120
13C8-PFOA	121
13C9-PFNA	102
13C6-PFDA	120
13C7-PFUnA	90
13C2-PFDoA	106
13C2-PFTeDA	127
d3-MeFOSAA	134
d5-EtFOSAA	93
13C3-PFBS	147
13C3-PFHxS	146
13C8-PFOS	140

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

Client ID		VC-PM64B-SB02-0506			
Battelle ID		J8378-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		19.76			
Matrix		SB			
Sample Size		1.59			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.55 J	0.42	1.26	6.29
PFHpA	375-85-9	1.26 U	0.55	1.26	6.29
PFOA	335-67-1	0.69 J	0.63	1.26	6.29
PFNA	375-95-1	1.26 U	0.54	1.26	6.29
PFDA	335-76-2	1.26 U	0.34	1.26	6.29
PFUnA	2058-94-8	1.26 U	0.52	1.26	6.29
PFDoA	307-55-1	0.63 U	0.30	0.63	6.29
PFTrDA	72629-94-8	1.26 U	0.35	1.26	6.29
PFTeDA	376-06-7	2.52 U	0.79	2.52	6.29
NMeFOSAA	2355-31-9	3.14 U	1.41	3.14	6.29
NEtFOSAA	2991-50-6	2.52 U	0.72	2.52	6.29
PFBS	375-73-5	1.26 U	0.45	1.26	6.29
PFHxS	355-46-4	9.22	0.28	0.63	6.29
PFOS	1763-23-1	47.97	0.34	1.26	6.29

Surrogate Recoveries (%)

13C5-PFHxA	89
13C4-PFHpA	100
13C8-PFOA	115
13C9-PFNA	112
13C6-PFDA	117
13C7-PFUnA	116
13C2-PFDoA	112
13C2-PFTeDA	110
d3-MeFOSAA	117
d5-EtFOSAA	133
13C3-PFBS	124
13C3-PFHxS	119
13C8-PFOS	116

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

Client ID		VC-PM64B-SS03-000H				
Battelle ID		J8379-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		2.39				
Matrix		SS				
Sample Size		1.97				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.02	U	0.34	1.02	5.08
PFHpA	375-85-9	1.02	U	0.45	1.02	5.08
PFOA	335-67-1	1.02	U	0.51	1.02	5.08
PFNA	375-95-1	1.02	U	0.44	1.02	5.08
PFDA	335-76-2	1.02	U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02	U	0.42	1.02	5.08
PFDoA	307-55-1	0.51	U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02	U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03	U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54	U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03	U	0.58	2.03	5.08
PFBS	375-73-5	1.02	U	0.37	1.02	5.08
PFHxS	355-46-4	0.65	J	0.22	0.51	5.08
PFOS	1763-23-1	6.01		0.27	1.02	5.08

Surrogate Recoveries (%)

13C5-PFHxA	108
13C4-PFHpA	113
13C8-PFOA	113
13C9-PFNA	111
13C6-PFDA	121
13C7-PFUnA	128
13C2-PFDoA	116
13C2-PFTeDA	112
d3-MeFOSAA	114
d5-EtFOSAA	124
13C3-PFBS	123
13C3-PFHxS	127
13C8-PFOS	116

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

Client ID		VC-PM64B-SB03-0102			
Battelle ID		J8380-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		4.05			
Matrix		SB			
Sample Size		1.95			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.52 J	0.34	1.03	5.13
PFHpA	375-85-9	1.03 U	0.45	1.03	5.13
PFOA	335-67-1	1.03 U	0.51	1.03	5.13
PFNA	375-95-1	1.03 U	0.44	1.03	5.13
PFDA	335-76-2	1.03 U	0.28	1.03	5.13
PFUnA	2058-94-8	1.03 U	0.42	1.03	5.13
PFDoA	307-55-1	0.51 U	0.25	0.51	5.13
PFTrDA	72629-94-8	1.03 U	0.29	1.03	5.13
PFTeDA	376-06-7	2.05 U	0.65	2.05	5.13
NMeFOSAA	2355-31-9	2.56 U	1.15	2.56	5.13
NEtFOSAA	2991-50-6	2.05 U	0.58	2.05	5.13
PFBS	375-73-5	1.03 U	0.37	1.03	5.13
PFHxS	355-46-4	1.48 J	0.23	0.51	5.13
PFOS	1763-23-1	8.70	0.28	1.03	5.13

Surrogate Recoveries (%)

13C5-PFHxA	114
13C4-PFHpA	108
13C8-PFOA	118
13C9-PFNA	116
13C6-PFDA	125
13C7-PFUnA	131
13C2-PFDoA	116
13C2-PFTeDA	114
d3-MeFOSAA	101
d5-EtFOSAA	123
13C3-PFBS	128
13C3-PFHxS	125
13C8-PFOS	137

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

Client ID		KB80 IB			
Battelle ID		KB80 IB_10/08/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/08/2018			
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	92
13C4-PFHpA	93
13C8-PFOA	92
13C9-PFNA	93
13C6-PFDA	107
13C7-PFUnA	100
13C2-PFDoA	98
13C2-PFTeDA	96
d3-MeFOSAA	80
d5-EtFOSAA	86
13C3-PFBS	90
13C3-PFHxS	93
13C8-PFOS	98

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

Client ID		180507-02: Ottawa Sand			
Battelle ID		CR892PB-FS			
Sample Type		PB			
Collection Date		10/02/2018			
Extraction Date		10/02/2018			
Analysis Date		10/08/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		0.00			
Matrix		SEDIMENT			
Sample Size		2.05			
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	112
13C4-PFHpA	115
13C8-PFOA	114
13C9-PFNA	105
13C6-PFDA	118
13C7-PFUnA	126
13C2-PFDoA	118
13C2-PFTeDA	108
d3-MeFOSAA	110
d5-EtFOSAA	136
13C3-PFBS	120
13C3-PFHxS	123
13C8-PFOS	119

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

Client ID		180507-02: Ottawa Sand					
Battelle ID		CR893LCS-FS					
Sample Type		LCS					
Collection Date		10/02/2018					
Extraction Date		10/02/2018					
Analysis Date		10/08/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		0.00					
Matrix		SEDIMENT					
Sample Size		2.04					
Size Unit-Basis		g				Control Limits	
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	31.14	39.61	79		45	135
PFHpA	375-85-9	33.01	39.22	84		60	128
PFOA	335-67-1	35.41	39.22	90		56	136
PFNA	375-95-1	31.42	39.22	80		54	130
PFDA	335-76-2	35.77	39.22	91		55	141
PFUnA	2058-94-8	33.07	39.22	84		57	137
PFDoA	307-55-1	34.34	39.22	88		62	134
PFTrDA	72629-94-8	32.80	39.22	84		51	127
PFTeDA	376-06-7	33.53	39.22	86		34	162
NMeFOSAA	2355-31-9	30.99	39.22	79		52	146
NEtFOSAA	2991-50-6	29.55	39.22	75		54	124
PFBS	375-73-5	33.27	39.61	84		57	145
PFHxS	355-46-4	32.02	39.61	81		52	132
PFOS	1763-23-1	34.65	39.22	88		50	130

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	114
13C8-PFOA	112
13C9-PFNA	116
13C6-PFDA	106
13C7-PFUnA	109
13C2-PFDoA	109
13C2-PFTeDA	115
d3-MeFOSAA	121
d5-EtFOSAA	111
13C3-PFBS	117
13C3-PFHxS	115
13C8-PFOS	104

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

Client ID		VC-PM324-SB03-0102	VC-PM324-SB03-0102-MS					
Battelle ID		J8364-FS	J8366MS-FS					
Sample Type		SA	MS					
Collection Date		09/24/2018	09/24/2018					
Extraction Date		10/02/2018	10/02/2018					
Analysis Date		10/09/2018	10/09/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS	Sciex 5500 LC/MS/MS					
% Moisture		3.28	3.21					
Matrix		SB	SB					
Sample Size		1.90	1.87					
Size Unit-Basis		g	g				Control Limits	
Units		ng/g_Dry	ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	1.23 J	80.66	86.42	92		45	135
PFHpA	375-85-9	1.05 U	70.44	85.56	82		60	128
PFOA	335-67-1	0.67 J	94.76 D	85.56	110		56	136
PFNA	375-95-1	0.57 J	69.23	85.56	80		54	130
PFDA	335-76-2	1.05 U	99.41 D	85.56	116		55	141
PFUnA	2058-94-8	1.05 U	92.40 D	85.56	108		57	137
PFDoA	307-55-1	0.53 U	70.26	85.56	82		62	134
PFTrDA	72629-94-8	1.05 U	73.04	85.56	85		51	127
PFTeDA	376-06-7	2.11 U	73.06	85.56	85		34	162
NMeFOSAA	2355-31-9	2.63 U	64.04	85.56	75		52	146
NEtFOSAA	2991-50-6	2.11 U	66.53	85.56	78		54	124
PFBS	375-73-5	1.05 U	75.15	86.42	87		57	145
PFHxS	355-46-4	2.76 J	75.10	86.42	84		52	132
PFOS	1763-23-1	216.54 D	327.72 D	85.56	130		50	130
Surrogate Recoveries (%)								
13C5-PFHxA		113	115					
13C4-PFHpA		105	110					
13C8-PFOA		118	100 D					
13C9-PFNA		99	105					
13C6-PFDA		114	113					
13C7-PFUnA		117	96 D					
13C2-PFDoA		104	96 D					
13C2-PFTeDA		106	131					
d3-MeFOSAA		107	146					
d5-EtFOSAA		128	132					
13C3-PFBS		117	142					
13C3-PFHxS		125	132					
13C8-PFOS		88 D	96 D					

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

Client ID		VC-PM324-SB03-0102-MSD								
Battelle ID		J8367MSD-FS								
Sample Type		MSD								
Collection Date		09/24/2018								
Extraction Date		10/02/2018								
Analysis Date		10/09/2018								
Analytical Instrument		Sciex 5500 LC/MS/MS								
% Moisture		3.18								
Matrix		SB								
Sample Size		1.87								
Size Unit-Basis		g				Control Limits				RPD
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper	RPD	Qual	Limit
PFHxA	307-24-4	75.29	86.42	86		45	135	6.7		≤ 30
PFHpA	375-85-9	71.65	85.56	84		60	128	2.4		≤ 30
PFOA	335-67-1	87.19	85.56	101		56	136	8.5		≤ 30
PFNA	375-95-1	74.44	85.56	86		54	130	7.2		≤ 30
PFDA	335-76-2	81.57	85.56	95		55	141	19.9		≤ 30
PFUnA	2058-94-8	89.35 D	85.56	104		57	137	3.8		≤ 30
PFDoA	307-55-1	75.27	85.56	88		62	134	7.1		≤ 30
PFTrDA	72629-94-8	73.23	85.56	86		51	127	1.2		≤ 30
PFTeDA	376-06-7	70.76	85.56	83		34	162	2.4		≤ 30
NMeFOSAA	2355-31-9	67.10	85.56	78		52	146	3.9		≤ 30
NEtFOSAA	2991-50-6	77.51	85.56	91		54	124	15.4		≤ 30
PFBS	375-73-5	74.23	86.42	86		57	145	1.2		≤ 30
PFHxS	355-46-4	72.75	86.42	81		52	132	3.6		≤ 30
PFOS	1763-23-1	276.95 D	85.56	71		50	130	58.7	N	≤ 30
Surrogate Recoveries (%)										
13C5-PFHxA		117								
13C4-PFHpA		116								
13C8-PFOA		103								
13C9-PFNA		103								
13C6-PFDA		108								
13C7-PFUnA		96 D								
13C2-PFDoA		121								
13C2-PFTeDA		124								
d3-MeFOSAA		150								
d5-EtFOSAA		122								
13C3-PFBS		145								
13C3-PFHxS		144								
13C8-PFOS		112 D								

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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 18-0584

Package DP-18-0289

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 18-0584

Package DP-18-0289

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

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

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

Analyst Approval: Lauren Griffith — Digitally signed by Lauren Griffith, DN: cn=Lauren Griffith, o=Battelle, ou, email=griffithl@battelle.org, c=US, Date: 2018.10.09 14:11:15 -04'00'

QC Chemist Approval: Carla Devine — Digitally signed by devinec@battelle.org, DN: cn=devinec@battelle.org, Date: 2018.10.18 10:40:28 -04'00'

Project Manager Approval: — Digitally signed by Jonathan Thorn, Date: 2018.10.19 15:41:23 -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 18-0584

Package DP-18-0289

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.	38
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.	364
7	***Chromatograms*** Sample And Standard Chromatograms.	520
8	***Unused Data***	NA

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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: 18-0584
Project/Site: Naval Base Ventura County
CTO: 4164

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Receipt Date
CR892PB-FS	180507-02: Ottawa Sand	SEDIMENT	10/2/2018	10/2/2018
CR893LCS-FS	180507-02: Ottawa Sand	SEDIMENT	10/2/2018	10/2/2018
J8352-FS	VC-PM323-SS01-000H	SS	9/24/2018	9/27/2018
J8353-FS	VC-PM323-SB01-0102	SB	9/24/2018	9/27/2018
J8354-FS	VC-PM323-SB01-0506	SB	9/24/2018	9/27/2018
J8355-FS	VC-PM323-SS03-000H	SS	9/24/2018	9/27/2018
J8356-FS	VC-PM323-SB03-0102	SB	9/24/2018	9/27/2018
J8357-FS	VC-PM323-SB03-0506	SB	9/24/2018	9/27/2018
J8360-FS	VC-PM324-SS01-000H	SS	9/24/2018	9/27/2018
J8361-FS	VC-PM324-SB01-0102	SB	9/24/2018	9/27/2018
J8362-FS	VC-PM324-SB01-0506	SB	9/24/2018	9/27/2018
J8363-FS	VC-PM324-SS03-000H	SS	9/24/2018	9/27/2018
J8364-FS	VC-PM324-SB03-0102	SB	9/24/2018	9/27/2018
J8365-FS	VC-PM324-SB03-0506	SB	9/24/2018	9/27/2018
J8366MS-FS	VC-PM324-SB03-0102-MS	SB	9/24/2018	9/27/2018
J8367MSD-FS	VC-PM324-SB03-0102-MSD	SB	9/24/2018	9/27/2018
J8373-FS	VC-PM64B-SS01-000H	SS	9/24/2018	9/27/2018
J8374-FS	VC-PM64B-SB01-0102	SB	9/24/2018	9/27/2018
J8375-FS	VC-PM64B-SB01-0506	SB	9/24/2018	9/27/2018
J8376-FS	VC-PM64B-SS02-000H	SS	9/24/2018	9/27/2018
J8377-FS	VC-PM64B-SB02-0102	SB	9/24/2018	9/27/2018
J8378-FS	VC-PM64B-SB02-0506	SB	9/24/2018	9/27/2018
J8379-FS	VC-PM64B-SS03-000H	SS	9/24/2018	9/27/2018
J8380-FS	VC-PM64B-SB03-0102	SB	9/24/2018	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

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

6.0 BUDGET

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

Table 6. Labor Budget (Laboratory Analytical Task)

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

7.0 STAFF DEVELOPMENT

None anticipated.

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WORK/QUALITY ASSURANCE PROJECT PLAN

Attachment 1: Target Samples

Shipment: **SHP-180921-01**

Status: Pending

Description: NBVC Basewide SI

Range: J8201-J8271

Comment: NA

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

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WORK/QUALITY ASSURANCE PROJECT PLAN

Shipment: **SHP-180921-01**

Status: Pending

Description: NBVC Basewide SI

Range: J8201-J8271

Comment: NA

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

Shipment: **SHP-180925-02**

Status: Approved

Description: NBVC Basewide SI

Range: J8291-J8334

Comment: NA

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

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WORK/QUALITY ASSURANCE PROJECT PLAN

Shipment: **SHP-180925-02**

Status: Approved

Description: NBVC Basewide SI

Range: J8291-J8334

Comment: NA

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

Shipment: **SHP-180927-02**

Status: Approved

Description: NBVC Basewide SI

Range: J8352-J8411

Comment: NA

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

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Shipment: **SHP-180927-02**

Status: Approved

Description: NBVC Basewide SI

Range: J8352-J8411

Comment: NA

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

Shipment: **SHP-180928-03**

Status: Pending

Description: NBVC Basewide SI

Range: J8438-J8476

Comment: NA

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

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Shipment: **SHP-180928-03**

Status: Pending

Description: NBVC Basewide SI

Range: J8438-J8476

Comment: NA

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

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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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It can be done

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

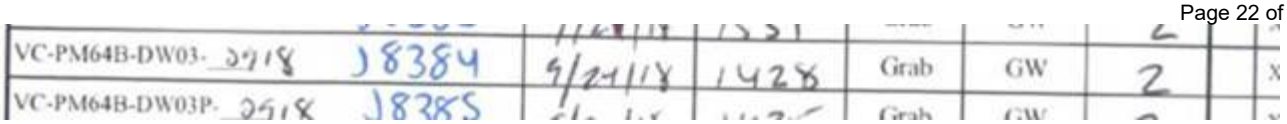
Hi Tiffany,

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

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)			

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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:		
Project Name: NBVC Basewide SI Project No.: 675803	Normal X Priority ☐ RUSH ☐ Time Zone: PST		COC # 3 Page# 1 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Analysis: Preservative NA	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		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:	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 J8366 (VB)	9/24/18	1050	Grab	SB	1	X
VC-PM324-SB03-0102-MSD J8367	9/24/18	1050	Grab	SB	1	X
~~EDT-SO-FB05~~ - 092418 J8368 VC	9/24/18	1330	Grab	AQ	2	X

~~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	Normal X Priority ☐ RUSH ☐	Analysis: PFAS by Method 537 Mod	Page# 4 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	
~~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. 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: PFAS by Method 537 Mod	Preservative: NA
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
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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:		
Project Name: NBVC Basewide SI	Normal ☒ Priority ☐ RUSH ☐		COC # 3
Project No.: 695803	Time Zone: PST		Page# 7 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	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.	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
Tiffany Hill
1100 NE Circle Blvd, Suite 300
Corvallis, OR
97330

Project Manager: Eric Davis
Sampler Information (print name): V. Kilbut
Phone: 724-977-3628
Email:
Turnaround Time (TAT) Requested:
Normal ☒
Priority ☐
RUSH ☐
Time Zone: PST

Project Name: NBVC Basewide SI
Project No.: 695803

Sampling Site: HS09
Site Information:
COC #: 3
Page#: 9 of 10

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	Total # of Cont.	Preservative: NA	Analysis: 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) 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

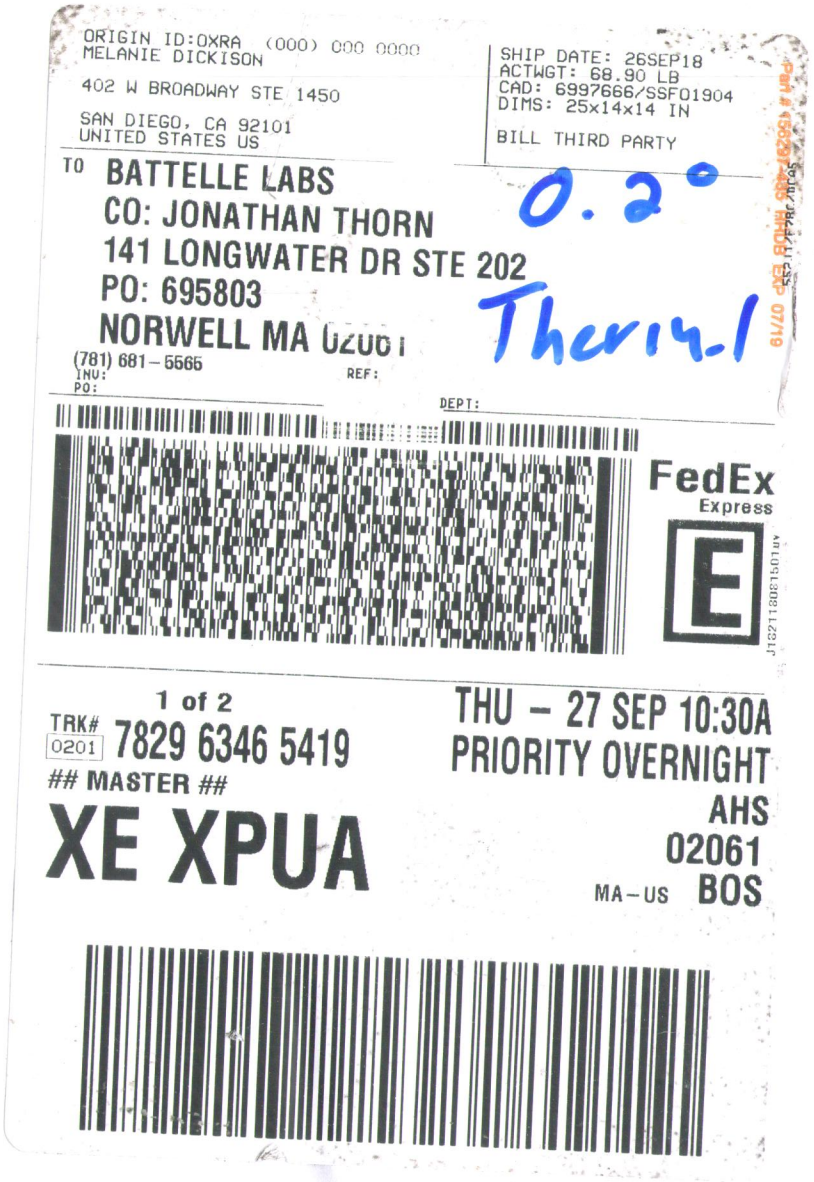
Client Contact Information	Project Manager: Eric Davis	Sampling Site: AOC 16	Site Information:
Tiffany Hill 1100 NE Circle Blvd, Suite 300 Corvallis, OR 97330	Sampler Information (print name): V. Kilbert Phone: 724-977-3628 Email:	Preservative: NA	COC # 3
Project Name: NBVC Basewide SI	Turnaround Time (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-PM323-SS01-000H				
Battelle ID		J8352-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		5.47				
Matrix		SS				
Sample Size		1.95				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	67.30		0.34	1.03	5.13
PFHpA	375-85-9	12.19		0.45	1.03	5.13
PFOA	335-67-1	13.05		0.51	1.03	5.13
PFNA	375-95-1	2.88	J	0.44	1.03	5.13
PFDA	335-76-2	4.42	J	0.28	1.03	5.13
PFUnA	2058-94-8	0.98	J	0.42	1.03	5.13
PFDoA	307-55-1	0.33	J	0.25	0.51	5.13
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.13
PFTeDA	376-06-7	2.05	U	0.65	2.05	5.13
NMeFOSAA	2355-31-9	2.56	U	1.15	2.56	5.13
NEtFOSAA	2991-50-6	2.05	U	0.58	2.05	5.13
PFBS	375-73-5	1.86	J	0.37	1.03	5.13
PFHxS	355-46-4	38.32		0.23	0.51	5.13
PFOS	1763-23-1	811.42	D	2.77	10.26	51.28

Surrogate Recoveries (%)

13C5-PFHxA	132	
13C4-PFHpA	129	
13C8-PFOA	108	
13C9-PFNA	90	
13C6-PFDA	120	
13C7-PFUnA	122	D
13C2-PFDoA	107	D
13C2-PFTeDA	111	D
d3-MeFOSAA	123	
d5-EtFOSAA	149	
13C3-PFBS	149	
13C3-PFHxS	146	
13C8-PFOS	95	D

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

Client ID		VC-PM323-SB01-0102				
Battelle ID		J8353-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		7.31				
Matrix		SB				
Sample Size		1.92				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	25.93		0.34	1.04	5.21
PFHpA	375-85-9	5.33		0.46	1.04	5.21
PFOA	335-67-1	16.34		0.52	1.04	5.21
PFNA	375-95-1	5.12	J	0.45	1.04	5.21
PFDA	335-76-2	1.70	J	0.28	1.04	5.21
PFUnA	2058-94-8	1.04	U	0.43	1.04	5.21
PFDoA	307-55-1	0.52	U	0.25	0.52	5.21
PFTrDA	72629-94-8	1.04	U	0.29	1.04	5.21
PFTeDA	376-06-7	2.08	U	0.66	2.08	5.21
NMeFOSAA	2355-31-9	2.60	U	1.17	2.60	5.21
NEtFOSAA	2991-50-6	2.08	U	0.59	2.08	5.21
PFBS	375-73-5	3.48	J	0.38	1.04	5.21
PFHxS	355-46-4	52.28		0.23	0.52	5.21
PFOS	1763-23-1	777.60	D	2.81	10.42	52.08

Surrogate Recoveries (%)

13C5-PFHxA	109	
13C4-PFHpA	110	
13C8-PFOA	100	
13C9-PFNA	91	
13C6-PFDA	124	
13C7-PFUnA	146	
13C2-PFDoA	126	
13C2-PFTeDA	125	
d3-MeFOSAA	135	
d5-EtFOSAA	146	
13C3-PFBS	131	
13C3-PFHxS	145	
13C8-PFOS	87	D

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

Client ID		VC-PM323-SB01-0506				
Battelle ID		J8354-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		6.93				
Matrix		SB				
Sample Size		1.82				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	27.34		0.36	1.10	5.49
PFHpA	375-85-9	3.27	J	0.48	1.10	5.49
PFOA	335-67-1	13.53		0.55	1.10	5.49
PFNA	375-95-1	1.10	U	0.47	1.10	5.49
PFDA	335-76-2	3.26	J	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	6.28		0.40	1.10	5.49
PFHxS	355-46-4	27.94		0.24	0.55	5.49
PFOS	1763-23-1	769.46	D	2.97	10.99	54.95

Surrogate Recoveries (%)

13C5-PFHxA	120	
13C4-PFHpA	119	
13C8-PFOA	103	
13C9-PFNA	80	
13C6-PFDA	108	
13C7-PFUnA	113	D
13C2-PFDoA	104	D
13C2-PFTeDA	105	D
d3-MeFOSAA	132	
d5-EtFOSAA	139	
13C3-PFBS	145	
13C3-PFHxS	148	
13C8-PFOS	101	D

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

Client ID		VC-PM323-SS03-000H				
Battelle ID		J8355-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		4.79				
Matrix		SS				
Sample Size		1.94				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.03	U	0.34	1.03	5.15
PFHpA	375-85-9	1.03	U	0.45	1.03	5.15
PFOA	335-67-1	1.03	U	0.52	1.03	5.15
PFNA	375-95-1	1.03	U	0.44	1.03	5.15
PFDA	335-76-2	1.03	U	0.28	1.03	5.15
PFUnA	2058-94-8	1.03	U	0.42	1.03	5.15
PFDoA	307-55-1	0.52	U	0.25	0.52	5.15
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.15
PFTeDA	376-06-7	2.06	U	0.65	2.06	5.15
NMeFOSAA	2355-31-9	2.58	U	1.15	2.58	5.15
NEtFOSAA	2991-50-6	2.06	U	0.59	2.06	5.15
PFBS	375-73-5	1.03	U	0.37	1.03	5.15
PFHxS	355-46-4	5.05	J	0.23	0.52	5.15
PFOS	1763-23-1	42.65		0.28	1.03	5.15

Surrogate Recoveries (%)

13C5-PFHxA	105
13C4-PFHpA	104
13C8-PFOA	115
13C9-PFNA	97
13C6-PFDA	107
13C7-PFUnA	109
13C2-PFDoA	99
13C2-PFTeDA	95
d3-MeFOSAA	76
d5-EtFOSAA	101
13C3-PFBS	119
13C3-PFHxS	115
13C8-PFOS	115

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

Client ID		VC-PM323-SB03-0102			
Battelle ID		J8356-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/08/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		4.54			
Matrix		SB			
Sample Size		1.97			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.08
PFHpA	375-85-9	1.02 U	0.45	1.02	5.08
PFOA	335-67-1	1.02 U	0.51	1.02	5.08
PFNA	375-95-1	1.02 U	0.44	1.02	5.08
PFDA	335-76-2	1.02 U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.08
PFDoA	307-55-1	0.51 U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02 U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03 U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54 U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03 U	0.58	2.03	5.08
PFBS	375-73-5	1.02 U	0.37	1.02	5.08
PFHxS	355-46-4	5.39	0.22	0.51	5.08
PFOS	1763-23-1	35.69	0.27	1.02	5.08

Surrogate Recoveries (%)

13C5-PFHxA	105
13C4-PFHpA	104
13C8-PFOA	104
13C9-PFNA	102
13C6-PFDA	106
13C7-PFUnA	114
13C2-PFDoA	98
13C2-PFTeDA	99
d3-MeFOSAA	112
d5-EtFOSAA	121
13C3-PFBS	121
13C3-PFHxS	122
13C8-PFOS	126

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

Client ID		VC-PM323-SB03-0506			
Battelle ID		J8357-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/08/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		6.98			
Matrix		SB			
Sample Size		1.90			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.05 U	0.35	1.05	5.26
PFHpA	375-85-9	1.05 U	0.46	1.05	5.26
PFOA	335-67-1	1.05 U	0.53	1.05	5.26
PFNA	375-95-1	1.05 U	0.45	1.05	5.26
PFDA	335-76-2	1.05 U	0.28	1.05	5.26
PFUnA	2058-94-8	1.05 U	0.43	1.05	5.26
PFDoA	307-55-1	0.53 U	0.25	0.53	5.26
PFTrDA	72629-94-8	1.05 U	0.29	1.05	5.26
PFTeDA	376-06-7	2.11 U	0.66	2.11	5.26
NMeFOSAA	2355-31-9	2.63 U	1.18	2.63	5.26
NEtFOSAA	2991-50-6	2.11 U	0.60	2.11	5.26
PFBS	375-73-5	1.05 U	0.38	1.05	5.26
PFHxS	355-46-4	6.93	0.23	0.53	5.26
PFOS	1763-23-1	4.72 J	0.28	1.05	5.26

Surrogate Recoveries (%)

13C5-PFHxA	113
13C4-PFHpA	110
13C8-PFOA	115
13C9-PFNA	109
13C6-PFDA	115
13C7-PFUnA	122
13C2-PFDoA	112
13C2-PFTeDA	112
d3-MeFOSAA	105
d5-EtFOSAA	115
13C3-PFBS	107
13C3-PFHxS	121
13C8-PFOS	101

BATTELLE
It can be done

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

Client ID		VC-PM324-SS01-000H			
Battelle ID		J8360-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		8.28			
Matrix		SS			
Sample Size		1.91			
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	1.05 U	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	0.47 J	0.28	1.05	5.24

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	105
13C8-PFOA	114
13C9-PFNA	107
13C6-PFDA	117
13C7-PFUnA	128
13C2-PFDoA	117
13C2-PFTeDA	117
d3-MeFOSAA	102
d5-EtFOSAA	102
13C3-PFBS	97
13C3-PFHxS	109
13C8-PFOS	110

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

Client ID		VC-PM324-SB01-0102			
Battelle ID		J8361-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		5.98			
Matrix		SB			
Sample Size		1.82			
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	0.55 U	0.24	0.55	5.49
PFOS	1763-23-1	0.34 J	0.30	1.10	5.49

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	105
13C8-PFOA	104
13C9-PFNA	99
13C6-PFDA	112
13C7-PFUnA	121
13C2-PFDoA	102
13C2-PFTeDA	107
d3-MeFOSAA	124
d5-EtFOSAA	131
13C3-PFBS	121
13C3-PFHxS	122
13C8-PFOS	115

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

Client ID		VC-PM324-SB01-0506			
Battelle ID		J8362-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		7.80			
Matrix		SB			
Sample Size		1.87			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.07 U	0.35	1.07	5.35
PFHpA	375-85-9	1.07 U	0.47	1.07	5.35
PFOA	335-67-1	1.07 U	0.53	1.07	5.35
PFNA	375-95-1	1.07 U	0.46	1.07	5.35
PFDA	335-76-2	1.07 U	0.29	1.07	5.35
PFUnA	2058-94-8	1.07 U	0.44	1.07	5.35
PFDoA	307-55-1	0.53 U	0.26	0.53	5.35
PFTrDA	72629-94-8	1.07 U	0.30	1.07	5.35
PFTeDA	376-06-7	2.14 U	0.67	2.14	5.35
NMeFOSAA	2355-31-9	2.67 U	1.20	2.67	5.35
NEtFOSAA	2991-50-6	2.14 U	0.61	2.14	5.35
PFBS	375-73-5	1.07 U	0.39	1.07	5.35
PFHxS	355-46-4	0.53 U	0.24	0.53	5.35
PFOS	1763-23-1	0.48 J	0.29	1.07	5.35

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	97
13C8-PFOA	111
13C9-PFNA	107
13C6-PFDA	119
13C7-PFUnA	130
13C2-PFDoA	112
13C2-PFTeDA	104
d3-MeFOSAA	126
d5-EtFOSAA	132
13C3-PFBS	115
13C3-PFHxS	106
13C8-PFOS	107

BATTELLE
It can be done

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

Client ID		VC-PM324-SS03-000H			
Battelle ID		J8363-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.64			
Matrix		SS			
Sample Size		2.00			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	3.24 J	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	1.71 J	0.22	0.50	5.00
PFOS	1763-23-1	39.59	0.27	1.00	5.00

Surrogate Recoveries (%)

13C5-PFHxA	92
13C4-PFHpA	93
13C8-PFOA	104
13C9-PFNA	92
13C6-PFDA	111
13C7-PFUnA	126
13C2-PFDoA	109
13C2-PFTeDA	109
d3-MeFOSAA	99
d5-EtFOSAA	115
13C3-PFBS	118
13C3-PFHxS	124
13C8-PFOS	114

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

Client ID		VC-PM324-SB03-0102				
Battelle ID		J8364-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		3.28				
Matrix		SB				
Sample Size		1.90				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.23	J	0.35	1.05	5.26
PFHpA	375-85-9	1.05	U	0.46	1.05	5.26
PFOA	335-67-1	0.67	J	0.53	1.05	5.26
PFNA	375-95-1	0.57	J	0.45	1.05	5.26
PFDA	335-76-2	1.05	U	0.28	1.05	5.26
PFUnA	2058-94-8	1.05	U	0.43	1.05	5.26
PFDoA	307-55-1	0.53	U	0.25	0.53	5.26
PFTrDA	72629-94-8	1.05	U	0.29	1.05	5.26
PFTeDA	376-06-7	2.11	U	0.66	2.11	5.26
NMeFOSAA	2355-31-9	2.63	U	1.18	2.63	5.26
NEtFOSAA	2991-50-6	2.11	U	0.60	2.11	5.26
PFBS	375-73-5	1.05	U	0.38	1.05	5.26
PFHxS	355-46-4	2.76	J	0.23	0.53	5.26
PFOS	1763-23-1	216.54	D	1.42	5.26	26.32

Surrogate Recoveries (%)

13C5-PFHxA	113	
13C4-PFHpA	105	
13C8-PFOA	118	
13C9-PFNA	99	
13C6-PFDA	114	
13C7-PFUnA	117	
13C2-PFDoA	104	
13C2-PFTeDA	106	
d3-MeFOSAA	107	
d5-EtFOSAA	128	
13C3-PFBS	117	
13C3-PFHxS	125	
13C8-PFOS	88	D

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

Client ID		VC-PM324-SB03-0506			
Battelle ID		J8365-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		21.35			
Matrix		SB			
Sample Size		1.58			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.27 U	0.42	1.27	6.33
PFHpA	375-85-9	1.27 U	0.56	1.27	6.33
PFOA	335-67-1	1.27 U	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	1.27 U	0.46	1.27	6.33
PFHxS	355-46-4	1.16 J	0.28	0.63	6.33
PFOS	1763-23-1	4.26 J	0.34	1.27	6.33

Surrogate Recoveries (%)

13C5-PFHxA	98
13C4-PFHpA	103
13C8-PFOA	115
13C9-PFNA	104
13C6-PFDA	108
13C7-PFUnA	113
13C2-PFDoA	106
13C2-PFTeDA	103
d3-MeFOSAA	110
d5-EtFOSAA	137
13C3-PFBS	111
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-PM64B-SS01-000H			
Battelle ID		J8373-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.77			
Matrix		SS			
Sample Size		1.99			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.01 U	0.33	1.01	5.03
PFHpA	375-85-9	1.01 U	0.44	1.01	5.03
PFOA	335-67-1	1.01 U	0.50	1.01	5.03
PFNA	375-95-1	1.01 U	0.43	1.01	5.03
PFDA	335-76-2	1.01 U	0.27	1.01	5.03
PFUnA	2058-94-8	1.01 U	0.41	1.01	5.03
PFDoA	307-55-1	0.50 U	0.24	0.50	5.03
PFTrDA	72629-94-8	1.01 U	0.28	1.01	5.03
PFTeDA	376-06-7	2.01 U	0.63	2.01	5.03
NMeFOSAA	2355-31-9	2.51 U	1.13	2.51	5.03
NEtFOSAA	2991-50-6	2.01 U	0.57	2.01	5.03
PFBS	375-73-5	1.01 U	0.36	1.01	5.03
PFHxS	355-46-4	0.27 J	0.22	0.50	5.03
PFOS	1763-23-1	2.34 J	0.27	1.01	5.03

Surrogate Recoveries (%)

13C5-PFHxA	101
13C4-PFHpA	102
13C8-PFOA	110
13C9-PFNA	100
13C6-PFDA	110
13C7-PFUnA	124
13C2-PFDoA	114
13C2-PFTeDA	107
d3-MeFOSAA	124
d5-EtFOSAA	137
13C3-PFBS	119
13C3-PFHxS	128
13C8-PFOS	121

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

Client ID		VC-PM64B-SB01-0102			
Battelle ID		J8374-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		4.27			
Matrix		SB			
Sample Size		1.97			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.08
PFHpA	375-85-9	1.02 U	0.45	1.02	5.08
PFOA	335-67-1	1.02 U	0.51	1.02	5.08
PFNA	375-95-1	1.02 U	0.44	1.02	5.08
PFDA	335-76-2	1.02 U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.08
PFDoA	307-55-1	0.51 U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02 U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03 U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54 U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03 U	0.58	2.03	5.08
PFBS	375-73-5	1.02 U	0.37	1.02	5.08
PFHxS	355-46-4	0.51 U	0.22	0.51	5.08
PFOS	1763-23-1	11.48	0.27	1.02	5.08

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	113
13C8-PFOA	118
13C9-PFNA	107
13C6-PFDA	105
13C7-PFUnA	115
13C2-PFDoA	103
13C2-PFTeDA	102
d3-MeFOSAA	110
d5-EtFOSAA	129
13C3-PFBS	114
13C3-PFHxS	119
13C8-PFOS	123

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

Client ID		VC-PM64B-SB01-0506			
Battelle ID		J8375-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		20.93			
Matrix		SB			
Sample Size		1.59			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.26 U	0.42	1.26	6.29
PFHpA	375-85-9	1.26 U	0.55	1.26	6.29
PFOA	335-67-1	1.26 U	0.63	1.26	6.29
PFNA	375-95-1	1.26 U	0.54	1.26	6.29
PFDA	335-76-2	1.26 U	0.34	1.26	6.29
PFUnA	2058-94-8	1.26 U	0.52	1.26	6.29
PFDoA	307-55-1	0.63 U	0.30	0.63	6.29
PFTrDA	72629-94-8	1.26 U	0.35	1.26	6.29
PFTeDA	376-06-7	2.52 U	0.79	2.52	6.29
NMeFOSAA	2355-31-9	3.14 U	1.41	3.14	6.29
NEtFOSAA	2991-50-6	2.52 U	0.72	2.52	6.29
PFBS	375-73-5	1.26 U	0.45	1.26	6.29
PFHxS	355-46-4	0.38 J	0.28	0.63	6.29
PFOS	1763-23-1	0.76 J	0.34	1.26	6.29

Surrogate Recoveries (%)

13C5-PFHxA	96
13C4-PFHpA	98
13C8-PFOA	104
13C9-PFNA	99
13C6-PFDA	112
13C7-PFUnA	123
13C2-PFDoA	110
13C2-PFTeDA	109
d3-MeFOSAA	118
d5-EtFOSAA	125
13C3-PFBS	115
13C3-PFHxS	107
13C8-PFOS	113

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

Client ID		VC-PM64B-SS02-000H			
Battelle ID		J8376-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		8.50			
Matrix		SS			
Sample Size		1.84			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	2.19 J	0.36	1.09	5.43
PFHpA	375-85-9	1.00 J	0.48	1.09	5.43
PFOA	335-67-1	1.72 J	0.54	1.09	5.43
PFNA	375-95-1	1.09 U	0.47	1.09	5.43
PFDA	335-76-2	0.33 J	0.29	1.09	5.43
PFUnA	2058-94-8	1.09 U	0.45	1.09	5.43
PFDoA	307-55-1	0.54 U	0.26	0.54	5.43
PFTrDA	72629-94-8	1.09 U	0.30	1.09	5.43
PFTeDA	376-06-7	2.17 U	0.68	2.17	5.43
NMeFOSAA	2355-31-9	2.72 U	1.22	2.72	5.43
NEtFOSAA	2991-50-6	2.17 U	0.62	2.17	5.43
PFBS	375-73-5	0.65 J	0.39	1.09	5.43
PFHxS	355-46-4	3.07 J	0.24	0.54	5.43
PFOS	1763-23-1	17.56	0.29	1.09	5.43

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	110
13C8-PFOA	119
13C9-PFNA	111
13C6-PFDA	128
13C7-PFUnA	132
13C2-PFDoA	131
13C2-PFTeDA	126
d3-MeFOSAA	122
d5-EtFOSAA	141
13C3-PFBS	132
13C3-PFHxS	146
13C8-PFOS	132

BATTELLE
It can be done

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

Client ID		VC-PM64B-SB02-0102			
Battelle ID		J8377-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		15.57			
Matrix		SB			
Sample Size		1.63			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.54 J	0.40	1.23	6.13
PFHpA	375-85-9	0.84 J	0.54	1.23	6.13
PFOA	335-67-1	1.35 J	0.61	1.23	6.13
PFNA	375-95-1	0.65 J	0.53	1.23	6.13
PFDA	335-76-2	1.01 J	0.33	1.23	6.13
PFUnA	2058-94-8	1.23 U	0.50	1.23	6.13
PFDoA	307-55-1	0.43 J	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	1.23 U	0.44	1.23	6.13
PFHxS	355-46-4	2.53 J	0.27	0.61	6.13
PFOS	1763-23-1	17.97	0.33	1.23	6.13

Surrogate Recoveries (%)

13C5-PFHxA	115
13C4-PFHpA	120
13C8-PFOA	121
13C9-PFNA	102
13C6-PFDA	120
13C7-PFUnA	90
13C2-PFDoA	106
13C2-PFTeDA	127
d3-MeFOSAA	134
d5-EtFOSAA	93
13C3-PFBS	147
13C3-PFHxS	146
13C8-PFOS	140

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

Client ID		VC-PM64B-SB02-0506			
Battelle ID		J8378-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		19.76			
Matrix		SB			
Sample Size		1.59			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.55 J	0.42	1.26	6.29
PFHpA	375-85-9	1.26 U	0.55	1.26	6.29
PFOA	335-67-1	0.69 J	0.63	1.26	6.29
PFNA	375-95-1	1.26 U	0.54	1.26	6.29
PFDA	335-76-2	1.26 U	0.34	1.26	6.29
PFUnA	2058-94-8	1.26 U	0.52	1.26	6.29
PFDoA	307-55-1	0.63 U	0.30	0.63	6.29
PFTrDA	72629-94-8	1.26 U	0.35	1.26	6.29
PFTeDA	376-06-7	2.52 U	0.79	2.52	6.29
NMeFOSAA	2355-31-9	3.14 U	1.41	3.14	6.29
NEtFOSAA	2991-50-6	2.52 U	0.72	2.52	6.29
PFBS	375-73-5	1.26 U	0.45	1.26	6.29
PFHxS	355-46-4	9.22	0.28	0.63	6.29
PFOS	1763-23-1	47.97	0.34	1.26	6.29

Surrogate Recoveries (%)

13C5-PFHxA	89
13C4-PFHpA	100
13C8-PFOA	115
13C9-PFNA	112
13C6-PFDA	117
13C7-PFUnA	116
13C2-PFDoA	112
13C2-PFTeDA	110
d3-MeFOSAA	117
d5-EtFOSAA	133
13C3-PFBS	124
13C3-PFHxS	119
13C8-PFOS	116

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

Client ID		VC-PM64B-SS03-000H				
Battelle ID		J8379-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		2.39				
Matrix		SS				
Sample Size		1.97				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.02	U	0.34	1.02	5.08
PFHpA	375-85-9	1.02	U	0.45	1.02	5.08
PFOA	335-67-1	1.02	U	0.51	1.02	5.08
PFNA	375-95-1	1.02	U	0.44	1.02	5.08
PFDA	335-76-2	1.02	U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02	U	0.42	1.02	5.08
PFDoA	307-55-1	0.51	U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02	U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03	U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54	U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03	U	0.58	2.03	5.08
PFBS	375-73-5	1.02	U	0.37	1.02	5.08
PFHxS	355-46-4	0.65	J	0.22	0.51	5.08
PFOS	1763-23-1	6.01		0.27	1.02	5.08

Surrogate Recoveries (%)

13C5-PFHxA	108
13C4-PFHpA	113
13C8-PFOA	113
13C9-PFNA	111
13C6-PFDA	121
13C7-PFUnA	128
13C2-PFDoA	116
13C2-PFTeDA	112
d3-MeFOSAA	114
d5-EtFOSAA	124
13C3-PFBS	123
13C3-PFHxS	127
13C8-PFOS	116

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

Client ID		VC-PM64B-SB03-0102			
Battelle ID		J8380-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		4.05			
Matrix		SB			
Sample Size		1.95			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	0.52 J	0.34	1.03	5.13
PFHpA	375-85-9	1.03 U	0.45	1.03	5.13
PFOA	335-67-1	1.03 U	0.51	1.03	5.13
PFNA	375-95-1	1.03 U	0.44	1.03	5.13
PFDA	335-76-2	1.03 U	0.28	1.03	5.13
PFUnA	2058-94-8	1.03 U	0.42	1.03	5.13
PFDoA	307-55-1	0.51 U	0.25	0.51	5.13
PFTrDA	72629-94-8	1.03 U	0.29	1.03	5.13
PFTeDA	376-06-7	2.05 U	0.65	2.05	5.13
NMeFOSAA	2355-31-9	2.56 U	1.15	2.56	5.13
NEtFOSAA	2991-50-6	2.05 U	0.58	2.05	5.13
PFBS	375-73-5	1.03 U	0.37	1.03	5.13
PFHxS	355-46-4	1.48 J	0.23	0.51	5.13
PFOS	1763-23-1	8.70	0.28	1.03	5.13

Surrogate Recoveries (%)

13C5-PFHxA	114
13C4-PFHpA	108
13C8-PFOA	118
13C9-PFNA	116
13C6-PFDA	125
13C7-PFUnA	131
13C2-PFDoA	116
13C2-PFTeDA	114
d3-MeFOSAA	101
d5-EtFOSAA	123
13C3-PFBS	128
13C3-PFHxS	125
13C8-PFOS	137

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

Client ID		KB80 IB			
Battelle ID		KB80 IB_10/08/2018			
Sample Type		IB			
Collection Date		NA			
Extraction Date		NA			
Analysis Date		10/08/2018			
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	92
13C4-PFHpA	93
13C8-PFOA	92
13C9-PFNA	93
13C6-PFDA	107
13C7-PFUnA	100
13C2-PFDoA	98
13C2-PFTeDA	96
d3-MeFOSAA	80
d5-EtFOSAA	86
13C3-PFBS	90
13C3-PFHxS	93
13C8-PFOS	98

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

Client ID		180507-02: Ottawa Sand				
Battelle ID		CR892PB-FS				
Sample Type		PB				
Collection Date		10/02/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		0.00				
Matrix		SEDIMENT				
Sample Size		2.05				
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	112
13C4-PFHpA	115
13C8-PFOA	114
13C9-PFNA	105
13C6-PFDA	118
13C7-PFUnA	126
13C2-PFDoA	118
13C2-PFTeDA	108
d3-MeFOSAA	110
d5-EtFOSAA	136
13C3-PFBS	120
13C3-PFHxS	123
13C8-PFOS	119

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

Client ID		180507-02: Ottawa Sand					
Battelle ID		CR893LCS-FS					
Sample Type		LCS					
Collection Date		10/02/2018					
Extraction Date		10/02/2018					
Analysis Date		10/08/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS					
% Moisture		0.00					
Matrix		SEDIMENT					
Sample Size		2.04					
Size Unit-Basis		g				Control Limits	
Units		ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	31.14	39.61	79		45	135
PFHpA	375-85-9	33.01	39.22	84		60	128
PFOA	335-67-1	35.41	39.22	90		56	136
PFNA	375-95-1	31.42	39.22	80		54	130
PFDA	335-76-2	35.77	39.22	91		55	141
PFUnA	2058-94-8	33.07	39.22	84		57	137
PFDoA	307-55-1	34.34	39.22	88		62	134
PFTrDA	72629-94-8	32.80	39.22	84		51	127
PFTeDA	376-06-7	33.53	39.22	86		34	162
NMeFOSAA	2355-31-9	30.99	39.22	79		52	146
NEtFOSAA	2991-50-6	29.55	39.22	75		54	124
PFBS	375-73-5	33.27	39.61	84		57	145
PFHxS	355-46-4	32.02	39.61	81		52	132
PFOS	1763-23-1	34.65	39.22	88		50	130

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	114
13C8-PFOA	112
13C9-PFNA	116
13C6-PFDA	106
13C7-PFUnA	109
13C2-PFDoA	109
13C2-PFTeDA	115
d3-MeFOSAA	121
d5-EtFOSAA	111
13C3-PFBS	117
13C3-PFHxS	115
13C8-PFOS	104

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

Client ID		VC-PM324-SB03-0102	VC-PM324-SB03-0102-MS					
Battelle ID		J8364-FS	J8366MS-FS					
Sample Type		SA	MS					
Collection Date		09/24/2018	09/24/2018					
Extraction Date		10/02/2018	10/02/2018					
Analysis Date		10/09/2018	10/09/2018					
Analytical Instrument		Sciex 5500 LC/MS/MS	Sciex 5500 LC/MS/MS					
% Moisture		3.28	3.21					
Matrix		SB	SB					
Sample Size		1.90	1.87					
Size Unit-Basis		g	g				Control Limits	
Units		ng/g_Dry	ng/g_Dry	Target	Recovery	Qual	Lower	Upper
PFHxA	307-24-4	1.23 J	80.66	86.42	92		45	135
PFHpA	375-85-9	1.05 U	70.44	85.56	82		60	128
PFOA	335-67-1	0.67 J	94.76 D	85.56	110		56	136
PFNA	375-95-1	0.57 J	69.23	85.56	80		54	130
PFDA	335-76-2	1.05 U	99.41 D	85.56	116		55	141
PFUnA	2058-94-8	1.05 U	92.40 D	85.56	108		57	137
PFDoA	307-55-1	0.53 U	70.26	85.56	82		62	134
PFTrDA	72629-94-8	1.05 U	73.04	85.56	85		51	127
PFTeDA	376-06-7	2.11 U	73.06	85.56	85		34	162
NMeFOSAA	2355-31-9	2.63 U	64.04	85.56	75		52	146
NEtFOSAA	2991-50-6	2.11 U	66.53	85.56	78		54	124
PFBS	375-73-5	1.05 U	75.15	86.42	87		57	145
PFHxS	355-46-4	2.76 J	75.10	86.42	84		52	132
PFOS	1763-23-1	216.54 D	327.72 D	85.56	130		50	130
Surrogate Recoveries (%)								
13C5-PFHxA		113	115					
13C4-PFHpA		105	110					
13C8-PFOA		118	100 D					
13C9-PFNA		99	105					
13C6-PFDA		114	113					
13C7-PFUnA		117	96 D					
13C2-PFDoA		104	96 D					
13C2-PFTeDA		106	131					
d3-MeFOSAA		107	146					
d5-EtFOSAA		128	132					
13C3-PFBS		117	142					
13C3-PFHxS		125	132					
13C8-PFOS		88 D	96 D					

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

Client ID		VC-PM324-SB03-0102-MSD									
Battelle ID		J8367MSD-FS									
Sample Type		MSD									
Collection Date		09/24/2018									
Extraction Date		10/02/2018									
Analysis Date		10/09/2018									
Analytical Instrument		Sciex 5500 LC/MS/MS									
% Moisture		3.18									
Matrix		SB									
Sample Size		1.87									
Size Unit-Basis		g					Control Limits				RPD
Units		ng/g_Dry		Target	Recovery	Qual	Lower	Upper	RPD	Qual	Limit
PFHxA	307-24-4	75.29		86.42	86		45	135	6.7		≤ 30
PFHpA	375-85-9	71.65		85.56	84		60	128	2.4		≤ 30
PFOA	335-67-1	87.19		85.56	101		56	136	8.5		≤ 30
PFNA	375-95-1	74.44		85.56	86		54	130	7.2		≤ 30
PFDA	335-76-2	81.57		85.56	95		55	141	19.9		≤ 30
PFUnA	2058-94-8	89.35	D	85.56	104		57	137	3.8		≤ 30
PFDoA	307-55-1	75.27		85.56	88		62	134	7.1		≤ 30
PFTrDA	72629-94-8	73.23		85.56	86		51	127	1.2		≤ 30
PFTeDA	376-06-7	70.76		85.56	83		34	162	2.4		≤ 30
NMeFOSAA	2355-31-9	67.10		85.56	78		52	146	3.9		≤ 30
NEtFOSAA	2991-50-6	77.51		85.56	91		54	124	15.4		≤ 30
PFBS	375-73-5	74.23		86.42	86		57	145	1.2		≤ 30
PFHxS	355-46-4	72.75		86.42	81		52	132	3.6		≤ 30
PFOS	1763-23-1	276.95	D	85.56	71		50	130	58.7	N	≤ 30
Surrogate Recoveries (%)											
13C5-PFHxA		117									
13C4-PFHpA		116									
13C8-PFOA		103									
13C9-PFNA		103									
13C6-PFDA		108									
13C7-PFUnA		96	D								
13C2-PFDoA		121									
13C2-PFTeDA		124									
d3-MeFOSAA		150									
d5-EtFOSAA		122									
13C3-PFBS		145									
13C3-PFHxS		144									
13C8-PFOS		112	D								

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Glossary of Data Qualifiers

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

Miscellaneous Documentation

QA/QC Summary
Batch 18-0584

Project:	CTO-4164 Naval Base Ventura County, California
Parameters:	PFAS
Laboratory:	Battelle, Norwell, MA
Matrix:	SS, SB
Data Set:	DP-18-0289
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	None.
Analysis	PFAS were measured by liquid chromatography tandem mass spectrometry (LC-MS/MS) in the multiple reaction monitoring (MRM). An initial calibration consisting of representative target analytes, labelled analogs, and internal standards was analyzed prior to analysis to demonstrate the linear range of analysis. Calibration verification was performed at the beginning and end of 10 injections and at the end of each sequence. Target PFAS were quantified using the isotope dilution method. Samples are reported in ng/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	10/8-9/2018

QA/QC Summary
Batch 18-0584

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	1 exceedance noted.
	PFOS failed RSD criteria between the MS and MSD samples, the concentration of PFOS in the background sample was 2.5 higher than the amount fortified into the MS/MSD samples.

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.
	There are six (6) instances where 13C2-PFOA and 13C4-PFOS would fail IS area criteria. These failures are due to the amount of native PFOA and PFOS found in the samples interfering with the internal standards in the non-diluted extracts. In these cases, the extracted internal standards that would use these two internal standards are reported from a dilution to mitigate the interferences from the high concentrations in the non-diluted samples. No data is reported from extracts where the IS areas would have failed criteria.

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 18-0584

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: 18-0584
Data Set: DP-18-0289
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	1	The concentration of PFOS in the backround was approximately 2.5 times the fortification amount. Individual recoveries were acceptable. LMG 10/9/18
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-18-0289
Project Number:	100110125-01	**Prep Batch Number:**	18-0584
Entered By:	Lauren Griffith	**Entered On:**	10/09/2018
Test Code (Matrix Type):	Master_369(S)		

Samples that were manually integrated are noted on the quant reports with the comment (TRUE).
LMG 10/9/18

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.
LMG 10/9/18

There are six instances of extracted internal standards (surrogates) that would fall outside of the 50%-150% recovery criteria if reported from the non-diluted extract. This is due to the higher levels of native PFOA and PFOS found in the samples interfering with the 13C2-PFOA and 13C4-PFOS internal standards used to quantify the surrogates. In these cases, the surrogates are reported from dilutions, however, the native compounds are reported from the non-diluted extracts as the interferences are with the internal standards and not the surrogates used to quantify the native compounds.
LMG 10/9/18

Task Leader Approval:

SupervisorApproval:

PM Approval:



Digitally signed by Jonathan Thorn
Date: 2018.10.09 14:45:19 -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:	J8353-FS-D(5)
Client Sample ID:	VC-PM323-SB01-0102
Sample Size:	1.92
Units:	g
Dilution Factor:	100.000
PIV (L):	0.001
Target Analyte:	PFOS
MRM Transition:	499.0 / 80.0
Data file:	18-0601.wiff (calibration) and 18-0581_18-0584A.wiff (samples)
Result table:	18-0581_18-0584_BASE
Area:	7,677,262.83
IS Name:	13C8-PFOS
IS Area:	27,759.58
IS Amount (ng/L):	239.25
y-intercept:	0.18428
slope:	4.42892

$$\text{Concentration} = \frac{[(7677262.83/27759.58) - 0.18428]}{4.42892} * 239.25 * 0.001 * 100 / 1.92$$

ng/g = 777.60

*Final concentration may vary based on rounding.

Project Client: CH2M
Project Name: CTO-4164 Naval Base Ventura County, California
Project No.: 100110125-01
Preparation Batch: 18-0584
Data Set: DP-18-0289

		CR892PB-FS (180507-02: Ottawa Sand)	CR893LCS-FS (180507-02: Ottawa Sand)	J8366MS-FS (VC-PM324-SB03-0102-MS)	J8367MSD-FS (VC-PM324-SB03-0102-MSD)	J8352-FS (VC-PM323-SS01-000H)	J8353-FS (VC-PM323-SB01-0102)	J8354-FS (VC-PM323-SB01-0506)	J8355-FS (VC-PM323-SS03-000H)
PFHxA	307-24-4	-	L	L	L	L	L	L	-
PFHpA	375-85-9	-	L	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	-	-	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/Br

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

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

	J8356-FS (VC-PM323-SB03-0102)	J8357-FS (VC-PM323-SB03-0506)	J8360-FS (VC-PM324-SS01-000H)	J8361-FS (VC-PM324-SB01-0102)	J8362-FS (VC-PM324-SB01-0506)	J8363-FS (VC-PM324-SS03-000H)	J8364-FS (VC-PM324-SB03-0102)	J8365-FS (VC-PM324-SB03-0506)
PFHxA	-	-	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	-	-	-	-
PFHxS	L/Br	L/Br	-	-	-	-	-	-
PFOS	L/Br	-	-	-	-	L/Br	L/Br	-

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

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

	J8373-FS (VC-PM64B-SS01-000H)	J8374-FS (VC-PM64B-SB01-0102)	J8375-FS (VC-PM64B-SB01-0506)	J8376-FS (VC-PM64B-SS02-000H)	J8377-FS (VC-PM64B-SB02-0102)	J8378-FS (VC-PM64B-SB02-0506)	J8379-FS (VC-PM64B-SS03-000H)	J8380-FS (VC-PM64B-SB03-0102)
PFHxA	-	-	-	-	-	-	-	-
PFHpA	-	-	-	-	-	-	-	-
PFOA	-	-	-	-	-	-	-	-
PFNA	-	-	-	-	-	-	-	-
PFDA	-	-	-	-	-	-	-	-
PFUnA	-	-	-	-	-	-	-	-
PFDoA	-	-	-	-	-	-	-	-
PFTrDA	-	-	-	-	-	-	-	-
PFTeDA	-	-	-	-	-	-	-	-
NMeFOSAA	-	-	-	-	-	-	-	-
NEtFOSAA	-	-	-	-	-	-	-	-
PFBS	-	-	-	-	-	-	-	-
PFHxS	-	-	-	-	-	L/Br	-	-
PFOS	-	L/Br	-	L/Br	L/Br	L/Br	L/Br	L/Br

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

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

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Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper
KB77	L5	10/8/18 16:23	13C2-PFOA	74,719.21	37,359.61	112,078.82

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/8/18 15:40	13C2-PFOA	86,591.46	37,359.61	112,078.82	
KB74	L2	10/8/18 15:51	13C2-PFOA	87,760.75	37,359.61	112,078.82	
KB75	L3	10/8/18 16:01	13C2-PFOA	81,109.93	37,359.61	112,078.82	
KB76	L4	10/8/18 16:12	13C2-PFOA	89,899.45	37,359.61	112,078.82	
KB77	L5	10/8/18 16:23	13C2-PFOA	74,719.21	37,359.61	112,078.82	
KB78	L6	10/8/18 16:34	13C2-PFOA	71,860.81	37,359.61	112,078.82	
KB79	L7	10/8/18 16:45	13C2-PFOA	75,346.19	37,359.61	112,078.82	
KB80 IB	Instrument Blank	10/8/18 16:56	13C2-PFOA	80,851.75	37,359.61	112,078.82	
KB81 ICC	ICC	10/8/18 17:07	13C2-PFOA	95,393.87	37,359.61	112,078.82	
KB77 CCV	CCV	10/8/18 21:27	13C2-PFOA	94,565.00	37,359.61	112,078.82	
CR892PB-FS(3)	Procedural Blank	10/8/18 21:49	13C2-PFOA	81,275.08	37,359.61	112,078.82	
CR893LCS-FS(3)	Laboratory Control Sample	10/8/18 22:00	13C2-PFOA	86,442.69	37,359.61	112,078.82	
J8352-FS(3)	VC-PM323-SS01-000H	10/8/18 22:11	13C2-PFOA	76,698.75	37,359.61	112,078.82	
J8352-FS-D(5)	VC-PM323-SS01-000H	10/8/18 22:22	13C2-PFOA	102,604.75	37,359.61	112,078.82	
J8353-FS(3)	VC-PM323-SB01-0102	10/8/18 22:32	13C2-PFOA	96,141.10	37,359.61	112,078.82	
J8353-FS-D(5)	VC-PM323-SB01-0102	10/8/18 22:43	13C2-PFOA	101,025.99	37,359.61	112,078.82	
J8354-FS(3)	VC-PM323-SB01-0506	10/8/18 22:54	13C2-PFOA	85,853.59	37,359.61	112,078.82	
J8354-FS-D(5)	VC-PM323-SB01-0506	10/8/18 23:05	13C2-PFOA	100,319.87	37,359.61	112,078.82	
J8355-FS(3)	VC-PM323-SS03-000H	10/8/18 23:16	13C2-PFOA	90,628.15	37,359.61	112,078.82	
J8356-FS(3)	VC-PM323-SB03-0102	10/8/18 23:27	13C2-PFOA	100,653.09	37,359.61	112,078.82	
KB76 CCV	CCV	10/8/18 23:38	13C2-PFOA	91,001.88	37,359.61	112,078.82	
J8357-FS(3)	VC-PM323-SB03-0506	10/8/18 23:59	13C2-PFOA	85,749.99	37,359.61	112,078.82	
J8360-FS(3)	VC-PM324-SS01-000H	10/9/18 0:10	13C2-PFOA	92,561.60	37,359.61	112,078.82	
J8361-FS(3)	VC-PM324-SB01-0102	10/9/18 0:21	13C2-PFOA	106,284.61	37,359.61	112,078.82	
J8362-FS(3)	VC-PM324-SB01-0506	10/9/18 0:32	13C2-PFOA	94,655.33	37,359.61	112,078.82	
J8363-FS(3)	VC-PM324-SS03-000H	10/9/18 0:43	13C2-PFOA	102,129.50	37,359.61	112,078.82	
J8364-FS(3)	VC-PM324-SB03-0102	10/9/18 0:54	13C2-PFOA	97,783.29	37,359.61	112,078.82	
J8364-FS-D(5)	VC-PM324-SB03-0102	10/9/18 1:04	13C2-PFOA	95,346.14	37,359.61	112,078.82	
J8365-FS(3)	VC-PM324-SB03-0506	10/9/18 1:15	13C2-PFOA	106,886.05	37,359.61	112,078.82	
J8366MS-FS(3)	VC-PM324-SB03-0102-MS	10/9/18 1:26	13C2-PFOA	91,504.82	37,359.61	112,078.82	
J8366MS-FS-D(5)	VC-PM324-SB03-0102-MS	10/9/18 1:37	13C2-PFOA	88,813.91	37,359.61	112,078.82	
KB77 CCV	CCV	10/9/18 1:48	13C2-PFOA	97,031.12	37,359.61	112,078.82	
J8367MSD-FS(3)	VC-PM324-SB03-0102-MSD	10/9/18 2:10	13C2-PFOA	87,897.02	37,359.61	112,078.82	
J8367MSD-FS-D(5)	VC-PM324-SB03-0102-MSD	10/9/18 2:20	13C2-PFOA	97,907.46	37,359.61	112,078.82	
J8373-FS(3)	VC-PM64B-SS01-000H	10/9/18 2:31	13C2-PFOA	99,714.81	37,359.61	112,078.82	
J8374-FS(3)	VC-PM64B-SB01-0102	10/9/18 2:42	13C2-PFOA	82,063.26	37,359.61	112,078.82	
J8375-FS(3)	VC-PM64B-SB01-0506	10/9/18 2:53	13C2-PFOA	106,524.38	37,359.61	112,078.82	
J8376-FS(3)	VC-PM64B-SS02-000H	10/9/18 3:04	13C2-PFOA	89,784.56	37,359.61	112,078.82	
J8377-FS(3)	VC-PM64B-SB02-0102	10/9/18 3:15	13C2-PFOA	85,636.60	37,359.61	112,078.82	
J8378-FS(3)	VC-PM64B-SB02-0506	10/9/18 3:26	13C2-PFOA	92,647.99	37,359.61	112,078.82	
J8379-FS(3)	VC-PM64B-SS03-000H	10/9/18 3:37	13C2-PFOA	83,619.04	37,359.61	112,078.82	
J8380-FS(3)	VC-PM64B-SB03-0102	10/9/18 3:47	13C2-PFOA	87,464.07	37,359.61	112,078.82	
KB76 CCV	CCV	10/9/18 3:58	13C2-PFOA	90,750.56	37,359.61	112,078.82	

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	10/8/18 16:23	13C2-PFDA	86,580.45	43,290.23	129,870.68

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/8/18 15:40	13C2-PFDA	101,004.57	43,290.23	129,870.68	
KB74	L2	10/8/18 15:51	13C2-PFDA	106,217.49	43,290.23	129,870.68	
KB75	L3	10/8/18 16:01	13C2-PFDA	100,766.55	43,290.23	129,870.68	
KB76	L4	10/8/18 16:12	13C2-PFDA	113,933.91	43,290.23	129,870.68	
KB77	L5	10/8/18 16:23	13C2-PFDA	86,580.45	43,290.23	129,870.68	
KB78	L6	10/8/18 16:34	13C2-PFDA	82,606.87	43,290.23	129,870.68	
KB79	L7	10/8/18 16:45	13C2-PFDA	92,416.04	43,290.23	129,870.68	
KB80 IB	Instrument Blank	10/8/18 16:56	13C2-PFDA	85,865.67	43,290.23	129,870.68	
KB81 ICC	ICC	10/8/18 17:07	13C2-PFDA	95,331.22	43,290.23	129,870.68	
KB77 CCV	CCV	10/8/18 21:27	13C2-PFDA	109,891.00	43,290.23	129,870.68	
CR892PB-FS(3)	Procedural Blank	10/8/18 21:49	13C2-PFDA	91,995.31	43,290.23	129,870.68	
CR893LCS-FS(3)	Laboratory Control Sample	10/8/18 22:00	13C2-PFDA	106,895.03	43,290.23	129,870.68	
J8352-FS(3)	VC-PM323-SS01-000H	10/8/18 22:11	13C2-PFDA	51,403.92	43,290.23	129,870.68	
J8352-FS-D(5)	VC-PM323-SS01-000H	10/8/18 22:22	13C2-PFDA	89,508.25	43,290.23	129,870.68	
J8353-FS(3)	VC-PM323-SB01-0102	10/8/18 22:32	13C2-PFDA	98,260.87	43,290.23	129,870.68	
J8353-FS-D(5)	VC-PM323-SB01-0102	10/8/18 22:43	13C2-PFDA	115,693.48	43,290.23	129,870.68	
J8354-FS(3)	VC-PM323-SB01-0506	10/8/18 22:54	13C2-PFDA	59,819.88	43,290.23	129,870.68	
J8354-FS-D(5)	VC-PM323-SB01-0506	10/8/18 23:05	13C2-PFDA	89,143.72	43,290.23	129,870.68	
J8355-FS(3)	VC-PM323-SS03-000H	10/8/18 23:16	13C2-PFDA	112,697.33	43,290.23	129,870.68	
J8356-FS(3)	VC-PM323-SB03-0102	10/8/18 23:27	13C2-PFDA	121,060.05	43,290.23	129,870.68	
KB76 CCV	CCV	10/8/18 23:38	13C2-PFDA	105,828.45	43,290.23	129,870.68	
J8357-FS(3)	VC-PM323-SB03-0506	10/8/18 23:59	13C2-PFDA	104,083.51	43,290.23	129,870.68	
J8360-FS(3)	VC-PM324-SS01-000H	10/9/18 0:10	13C2-PFDA	105,158.79	43,290.23	129,870.68	
J8361-FS(3)	VC-PM324-SB01-0102	10/9/18 0:21	13C2-PFDA	118,464.28	43,290.23	129,870.68	
J8362-FS(3)	VC-PM324-SB01-0506	10/9/18 0:32	13C2-PFDA	105,569.54	43,290.23	129,870.68	
J8363-FS(3)	VC-PM324-SS03-000H	10/9/18 0:43	13C2-PFDA	111,483.71	43,290.23	129,870.68	
J8364-FS(3)	VC-PM324-SB03-0102	10/9/18 0:54	13C2-PFDA	120,398.41	43,290.23	129,870.68	
J8364-FS-D(5)	VC-PM324-SB03-0102	10/9/18 1:04	13C2-PFDA	121,862.77	43,290.23	129,870.68	
J8365-FS(3)	VC-PM324-SB03-0506	10/9/18 1:15	13C2-PFDA	127,762.97	43,290.23	129,870.68	
J8366MS-FS(3)	VC-PM324-SB03-0102-MS	10/9/18 1:26	13C2-PFDA	102,924.31	43,290.23	129,870.68	
J8366MS-FS-D(5)	VC-PM324-SB03-0102-MS	10/9/18 1:37	13C2-PFDA	107,677.55	43,290.23	129,870.68	
KB77 CCV	CCV	10/9/18 1:48	13C2-PFDA	117,709.72	43,290.23	129,870.68	
J8367MSD-FS(3)	VC-PM324-SB03-0102-MSD	10/9/18 2:10	13C2-PFDA	101,879.35	43,290.23	129,870.68	
J8367MSD-FS-D(5)	VC-PM324-SB03-0102-MSD	10/9/18 2:20	13C2-PFDA	108,954.11	43,290.23	129,870.68	
J8373-FS(3)	VC-PM64B-SS01-000H	10/9/18 2:31	13C2-PFDA	111,209.64	43,290.23	129,870.68	
J8374-FS(3)	VC-PM64B-SB01-0102	10/9/18 2:42	13C2-PFDA	100,963.37	43,290.23	129,870.68	
J8375-FS(3)	VC-PM64B-SB01-0506	10/9/18 2:53	13C2-PFDA	118,517.23	43,290.23	129,870.68	
J8376-FS(3)	VC-PM64B-SS02-000H	10/9/18 3:04	13C2-PFDA	97,703.09	43,290.23	129,870.68	
J8377-FS(3)	VC-PM64B-SB02-0102	10/9/18 3:15	13C2-PFDA	98,421.11	43,290.23	129,870.68	
J8378-FS(3)	VC-PM64B-SB02-0506	10/9/18 3:26	13C2-PFDA	113,882.66	43,290.23	129,870.68	
J8379-FS(3)	VC-PM64B-SS03-000H	10/9/18 3:37	13C2-PFDA	99,843.41	43,290.23	129,870.68	
J8380-FS(3)	VC-PM64B-SB03-0102	10/9/18 3:47	13C2-PFDA	101,412.28	43,290.23	129,870.68	
KB76 CCV	CCV	10/9/18 3:58	13C2-PFDA	104,741.82	43,290.23	129,870.68	

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	10/8/18 16:23	13C4-PFOS	25,614.67	12,807.34	38,422.01

Sample Name	Sample ID	Analysis Date	Analyte	Area	Lower	Upper	Qualifier
KB73	L1	10/8/18 15:40	13C4-PFOS	30,187.37	12,807.34	38,422.01	
KB74	L2	10/8/18 15:51	13C4-PFOS	30,121.59	12,807.34	38,422.01	
KB75	L3	10/8/18 16:01	13C4-PFOS	27,324.91	12,807.34	38,422.01	
KB76	L4	10/8/18 16:12	13C4-PFOS	32,065.20	12,807.34	38,422.01	
KB77	L5	10/8/18 16:23	13C4-PFOS	25,614.67	12,807.34	38,422.01	
KB78	L6	10/8/18 16:34	13C4-PFOS	27,558.53	12,807.34	38,422.01	
KB79	L7	10/8/18 16:45	13C4-PFOS	26,374.66	12,807.34	38,422.01	
KB80 IB	Instrument Blank	10/8/18 16:56	13C4-PFOS	28,550.52	12,807.34	38,422.01	
KB81 ICC	ICC	10/8/18 17:07	13C4-PFOS	30,554.31	12,807.34	38,422.01	
KB77 CCV	CCV	10/8/18 21:27	13C4-PFOS	30,166.21	12,807.34	38,422.01	
CR892PB-FS(3)	Procedural Blank	10/8/18 21:49	13C4-PFOS	25,377.92	12,807.34	38,422.01	
CR893LCS-FS(3)	Laboratory Control Sample	10/8/18 22:00	13C4-PFOS	31,440.48	12,807.34	38,422.01	
J8352-FS(3)	VC-PM323-SS01-000H	10/8/18 22:11	13C4-PFOS	22,634.61	12,807.34	38,422.01	
J8352-FS-D(5)	VC-PM323-SS01-000H	10/8/18 22:22	13C4-PFOS	29,222.83	12,807.34	38,422.01	
J8353-FS(3)	VC-PM323-SB01-0102	10/8/18 22:32	13C4-PFOS	26,649.07	12,807.34	38,422.01	
J8353-FS-D(5)	VC-PM323-SB01-0102	10/8/18 22:43	13C4-PFOS	31,658.45	12,807.34	38,422.01	
J8354-FS(3)	VC-PM323-SB01-0506	10/8/18 22:54	13C4-PFOS	23,514.85	12,807.34	38,422.01	
J8354-FS-D(5)	VC-PM323-SB01-0506	10/8/18 23:05	13C4-PFOS	29,487.21	12,807.34	38,422.01	
J8355-FS(3)	VC-PM323-SS03-000H	10/8/18 23:16	13C4-PFOS	30,178.09	12,807.34	38,422.01	
J8356-FS(3)	VC-PM323-SB03-0102	10/8/18 23:27	13C4-PFOS	27,996.20	12,807.34	38,422.01	
KB76 CCV	CCV	10/8/18 23:38	13C4-PFOS	30,807.03	12,807.34	38,422.01	
J8357-FS(3)	VC-PM323-SB03-0506	10/8/18 23:59	13C4-PFOS	30,768.63	12,807.34	38,422.01	
J8360-FS(3)	VC-PM324-SS01-000H	10/9/18 0:10	13C4-PFOS	33,406.43	12,807.34	38,422.01	
J8361-FS(3)	VC-PM324-SB01-0102	10/9/18 0:21	13C4-PFOS	30,854.32	12,807.34	38,422.01	
J8362-FS(3)	VC-PM324-SB01-0506	10/9/18 0:32	13C4-PFOS	29,619.61	12,807.34	38,422.01	
J8363-FS(3)	VC-PM324-SS03-000H	10/9/18 0:43	13C4-PFOS	30,633.00	12,807.34	38,422.01	
J8364-FS(3)	VC-PM324-SB03-0102	10/9/18 0:54	13C4-PFOS	30,126.16	12,807.34	38,422.01	
J8364-FS-D(5)	VC-PM324-SB03-0102	10/9/18 1:04	13C4-PFOS	35,775.26	12,807.34	38,422.01	
J8365-FS(3)	VC-PM324-SB03-0506	10/9/18 1:15	13C4-PFOS	32,763.58	12,807.34	38,422.01	
J8366MS-FS(3)	VC-PM324-SB03-0102-MS	10/9/18 1:26	13C4-PFOS	28,023.93	12,807.34	38,422.01	
J8366MS-FS-D(5)	VC-PM324-SB03-0102-MS	10/9/18 1:37	13C4-PFOS	27,686.59	12,807.34	38,422.01	
KB77 CCV	CCV	10/9/18 1:48	13C4-PFOS	33,177.85	12,807.34	38,422.01	
J8367MSD-FS(3)	VC-PM324-SB03-0102-MSD	10/9/18 2:10	13C4-PFOS	25,665.36	12,807.34	38,422.01	
J8367MSD-FS-D(5)	VC-PM324-SB03-0102-MSD	10/9/18 2:20	13C4-PFOS	27,794.59	12,807.34	38,422.01	
J8373-FS(3)	VC-PM64B-SS01-000H	10/9/18 2:31	13C4-PFOS	29,707.78	12,807.34	38,422.01	
J8374-FS(3)	VC-PM64B-SB01-0102	10/9/18 2:42	13C4-PFOS	27,204.94	12,807.34	38,422.01	
J8375-FS(3)	VC-PM64B-SB01-0506	10/9/18 2:53	13C4-PFOS	36,015.05	12,807.34	38,422.01	
J8376-FS(3)	VC-PM64B-SS02-000H	10/9/18 3:04	13C4-PFOS	28,712.39	12,807.34	38,422.01	
J8377-FS(3)	VC-PM64B-SB02-0102	10/9/18 3:15	13C4-PFOS	25,322.12	12,807.34	38,422.01	
J8378-FS(3)	VC-PM64B-SB02-0506	10/9/18 3:26	13C4-PFOS	32,036.69	12,807.34	38,422.01	
J8379-FS(3)	VC-PM64B-SS03-000H	10/9/18 3:37	13C4-PFOS	27,307.97	12,807.34	38,422.01	
J8380-FS(3)	VC-PM64B-SB03-0102	10/9/18 3:47	13C4-PFOS	27,696.59	12,807.34	38,422.01	
KB76 CCV	CCV	10/9/18 3:58	13C4-PFOS	29,067.50	12,807.34	38,422.01	

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 09/10/2018 1:52:16 PM

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 4:45:19 PM	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
PFBS_1	298.9 / 80.0	1.56	51	>10
PFBS_2	298.9 / 99.0	1.55	50	>10
PFHxA_1	313.0 / 269.0	1.88	25	>10
PFHxA_2	313.0 / 119.0	1.88	24	>10
PFHpA_1	363.0 / 319.0	2.29	33	>10
PFHpA_2	363.0 / 169.0	2.29	33	>10
PFHxS_1	399.0 / 80.0	2.32	54	>10
PFHxS_2	399.0 / 99.0	2.32	54	>10
PFOA_1	413.0 / 369.0	2.71	35	>10
PFOA_2	413.0 / 169.0	2.71	36	>10
PFNA_1	463.0 / 419.0	3.11	47	>10
PFNA_2	463.0 / 219.0	3.11	47	>10
PFOS_1	499.0 / 80.0	3.11	46	>10
PFOS_2	499.0 / 99.0	3.11	45	>10
PFDA_1	513.0 / 469.0	3.47	46	>10
PFDA_2	513.0 / 219.0	3.47	37	>10
PFUnA_1	563.0 / 519.0	3.79	61	>10
PFUnA_2	563.0 / 269.0	3.79	57	>10
PFDoA_1	613.0 / 569.0	4.08	65	>10
PFDoA_2	613.0 / 319.0	4.08	71	>10
PFTrDA_1	663.0 / 619.0	4.33	82	>10
PFTrDA_2	663.0 / 169.0	4.33	75	>10
PFTeDA_1	713.0 / 669.0	4.55	97	>10
PFTeDA_2	713.0 / 169.0	4.55	65	>10
NMeFOSAA_1	570.0 / 419.0	3.62	36	>10
NMeFOSAA_2	570.0 / 512.0	3.62	35	>10
NEtFOSAA_1	584.0 / 419.0	3.79	39	>10
NEtFOSAA_2	584.0 / 483.0	3.79	25	>10

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Mass Spectral Acquisition Rate Report

Created with Analyst Reporter
Printed: 09/10/2018 1:51:38 PM

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 4:45:19 PM	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Spectra Acquisition Rate	Passing Range
13C2-PFDoA	615.0 / 570.0	4.07	37	>10
d3-MeFOSAA	573.0 / 419.0	3.61	41	>10
d5-EtFOSAA	589.0 / 419.0	3.78	33	>10
13C5-PFHxA	318.0 / 273.0	1.87	38	>10
13C4-PFHpA	367.0 / 322.0	2.28	37	>10
13C8-PFOA	421.0 / 376.0	2.70	33	>10
13C9-PFNA	472.0 / 427.0	3.10	34	>10
13C6-PFDA	519.0 / 474.0	3.45	44	>10
13C7-PFUnA	570.0 / 525.0	3.78	40	>10
13C2-PFTeDA	715.0 / 670.0	4.54	47	>10
13C3-PFBS	302.0 / 99.0	1.54	28	>10
13C3-PFHxS	402.0 / 99.0	2.30	36	>10
13C8-PFOS	507.0 / 99.0	3.09	23	>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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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:

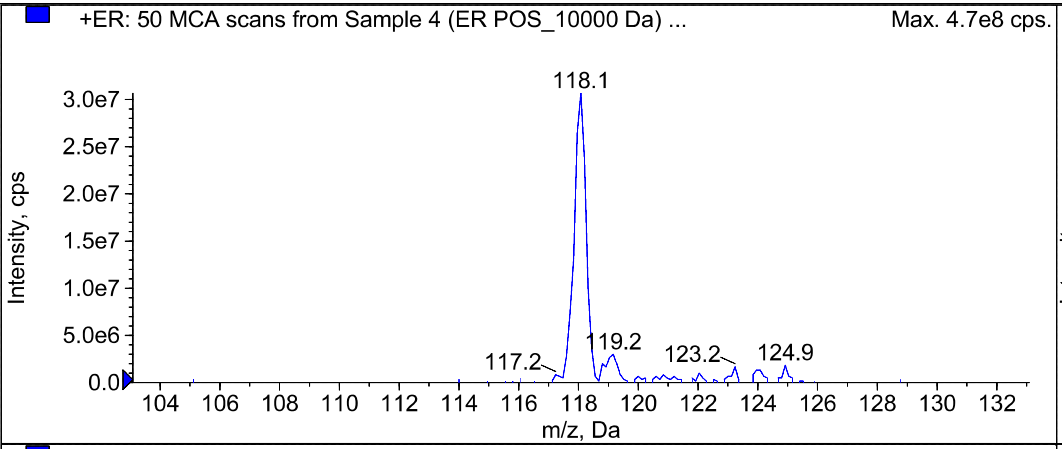
☑ Attach all spectrums printouts to this procedure.
☑ If any parameter setting access modes were changed during the PM, ensure they are returned to their normal access mode and that their offsets are adjusted to match optimized values from the post-PM acquisition files.
☐ Empty tuning cache folder, if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

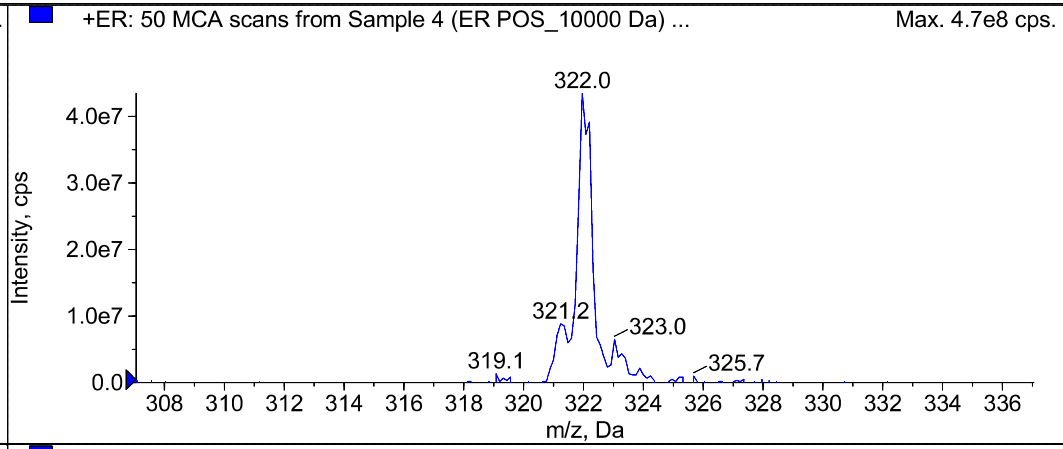
END OF PREVENTIVE MAINTENANCE CHECKLIST

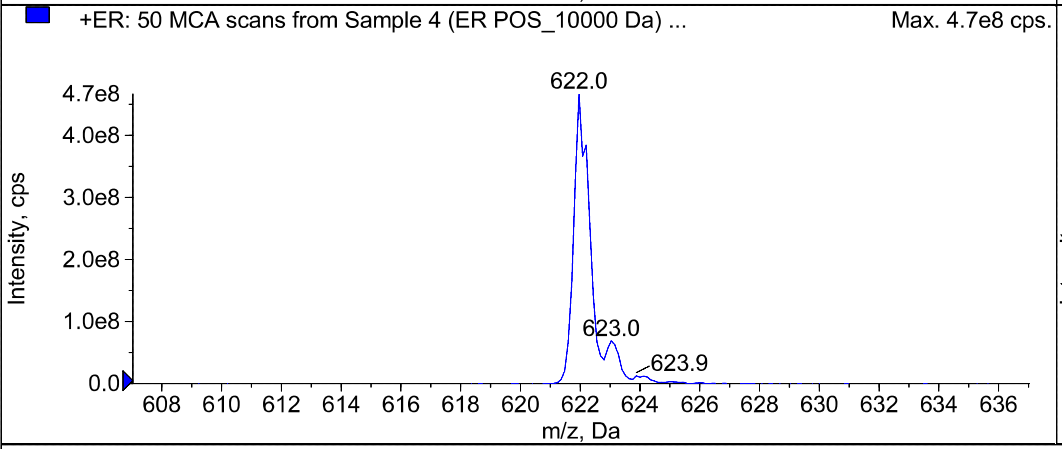
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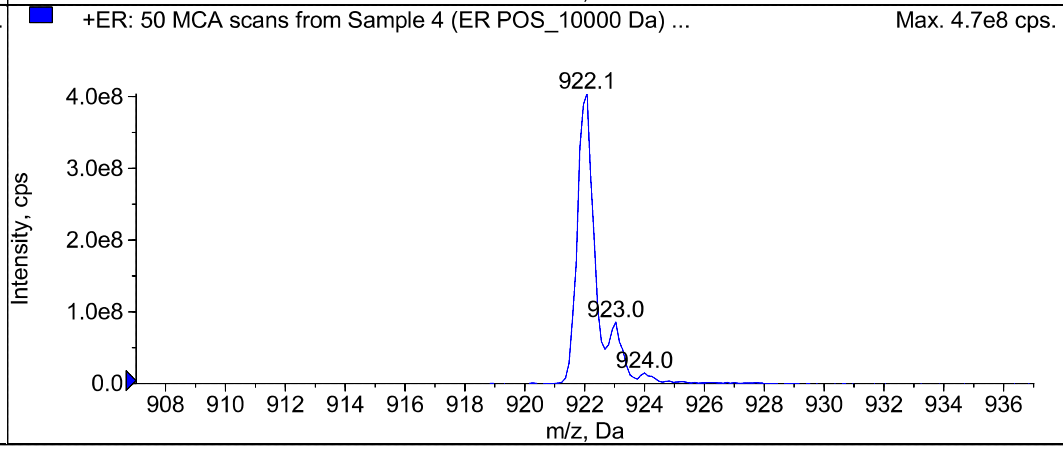
06 OCT 2016: Appendix ZEFPM003-2L: Removed requirements to fit Manufacturer's testing criteria.

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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
KB34	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: **KB34**

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:**	9/24/2018	**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: Thorn, Jonathan **Date:** 9/24/2018 3:46:00 PM

BATTELLE
It can be done

Standard Solution Concentrations

Approved: ☑

Standard Laboratory ID Number: KB34

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:** 9/24/2018 **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: Thorn, Jonathan **Date:** 9/24/2018 3:46:00 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

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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

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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

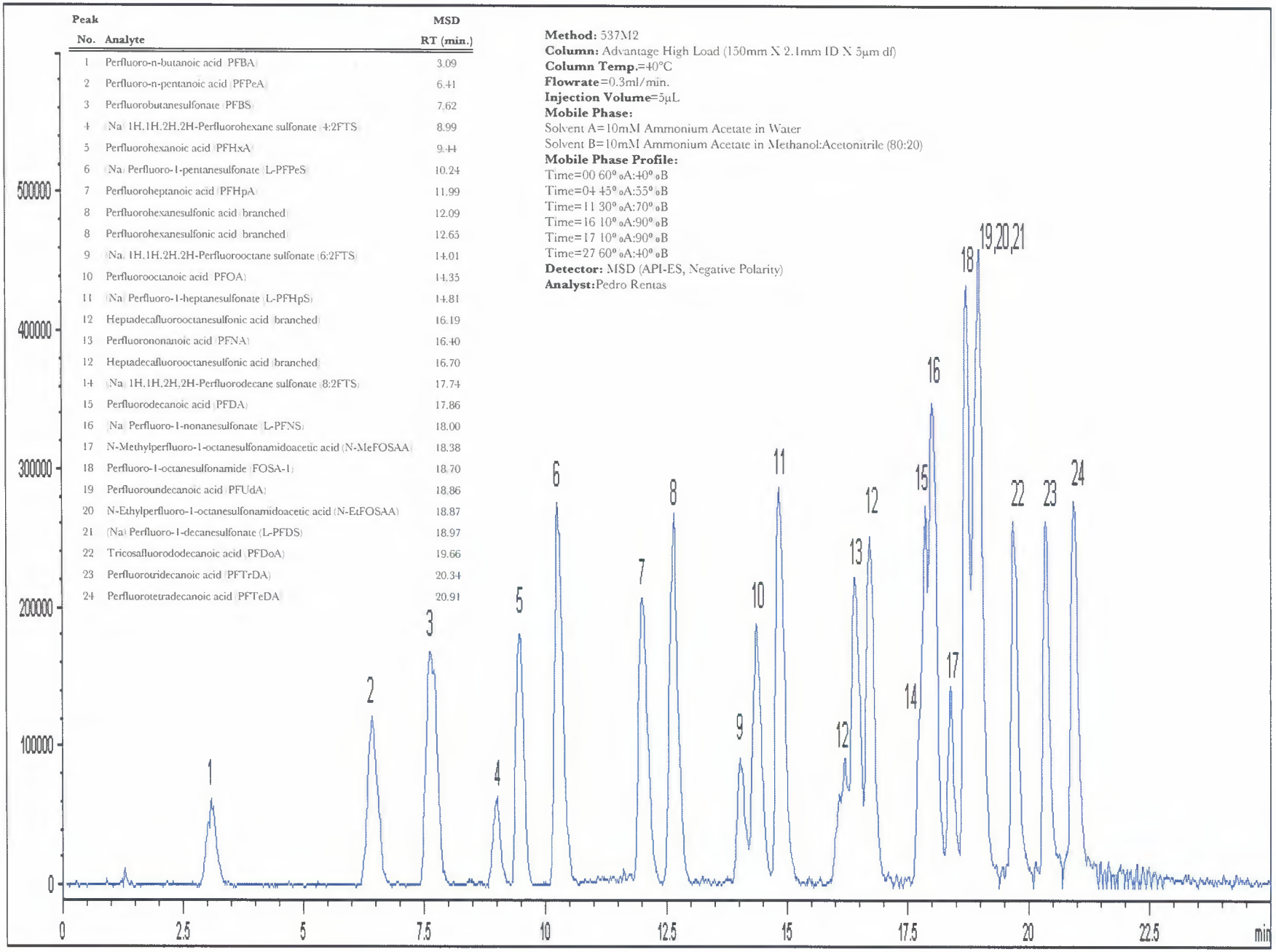
Note: All assigned values are anion concentrations.

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)	12.63
9	(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)	14.01
10	Perfluorooctanoic acid (PFOA)	14.35
11	(Na) Perfluoro-1-heptanesulfonate (L-PFHpS)	14.81
12	Heptadecafluorooctanesulfonic acid (branched)	16.19
13	Perfluorononanoic acid (PFNA)	16.40
12	Heptadecafluorooctanesulfonic acid (branched)	16.70
14	(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)	17.74
15	Perfluorodecanoic acid (PFDA)	17.86
16	(Na) Perfluoro-1-nonanesulfonate (L-PFNS)	18.00
17	N-Methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	18.38
18	Perfluoro-1-octanesulfonamide (FOSA-1)	18.70
19	Perfluoroundecanoic acid (PFUdA)	18.86
20	N-Ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	18.87
21	(Na) Perfluoro-1-decanesulfonate (L-PFDS)	18.97
22	Tricosafluorododecanoic acid (PFDoA)	19.66
23	Perfluorotridecanoic acid (PFTrDA)	20.34
24	Perfluorotetradecanoic acid (PFTeDA)	20.91

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



BATTELLE

It can be done

BDO Id: 180618-02

Reagent Receipt Report

Approved: ☐ Authorized ☐

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

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

Notes:

Approved by: _____ Approved on: _____

Authorized by: _____ Authorized on: _____

180618-02

WELLINGTON LABORATORIES

CERTIFICATE OF ANALYSIS DOCUMENTATION

br-NEtFOSAA

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

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

DESCRIPTION:

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

DOCUMENTATION/ DATA ATTACHED:

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

ADDITIONAL INFORMATION:

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

FOR LABORATORY USE ONLY: NOT FOR HUMAN OR DRUG USE

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

INTENDED USE:

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

HANDLING:

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

SYNTHESIS / CHARACTERIZATION:

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

HOMOGENEITY:

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

UNCERTAINTY:

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

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

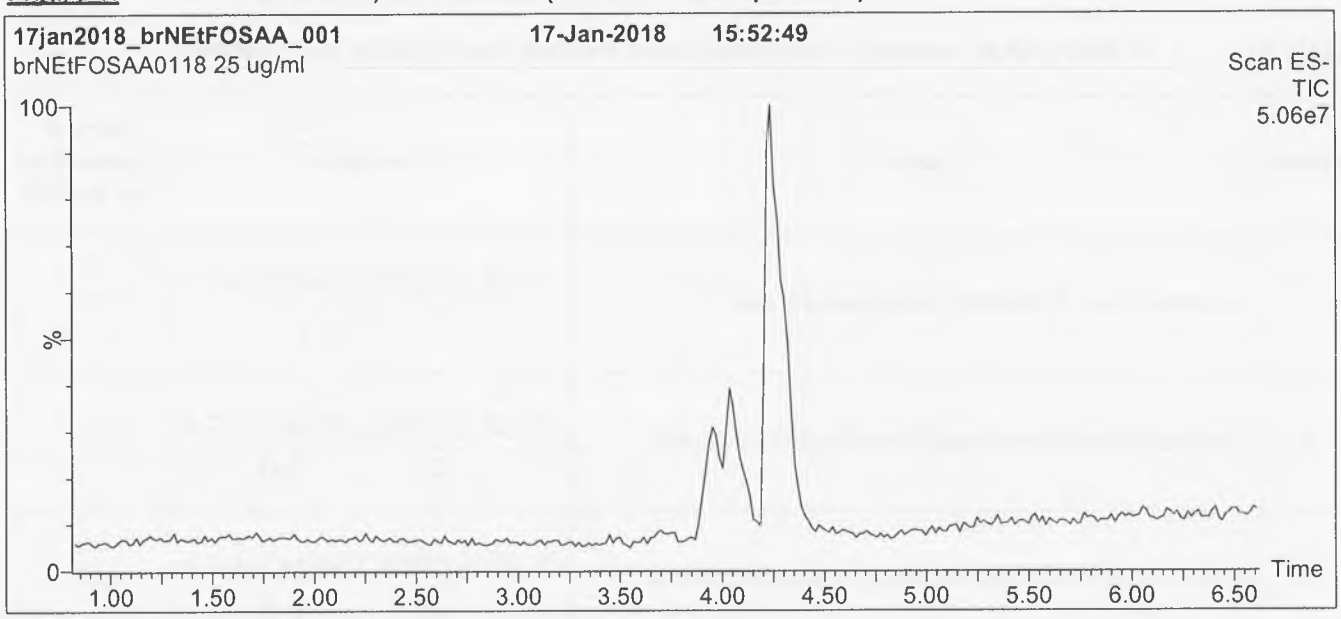
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-ethylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(C_2H_5)CH_2CO_2H$	77.5
2	N-ethylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(C_2H_5)CH_2CO_2H$	2.3
3	N-ethylperfluoro-4-methylheptanesulfonamidoacetic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

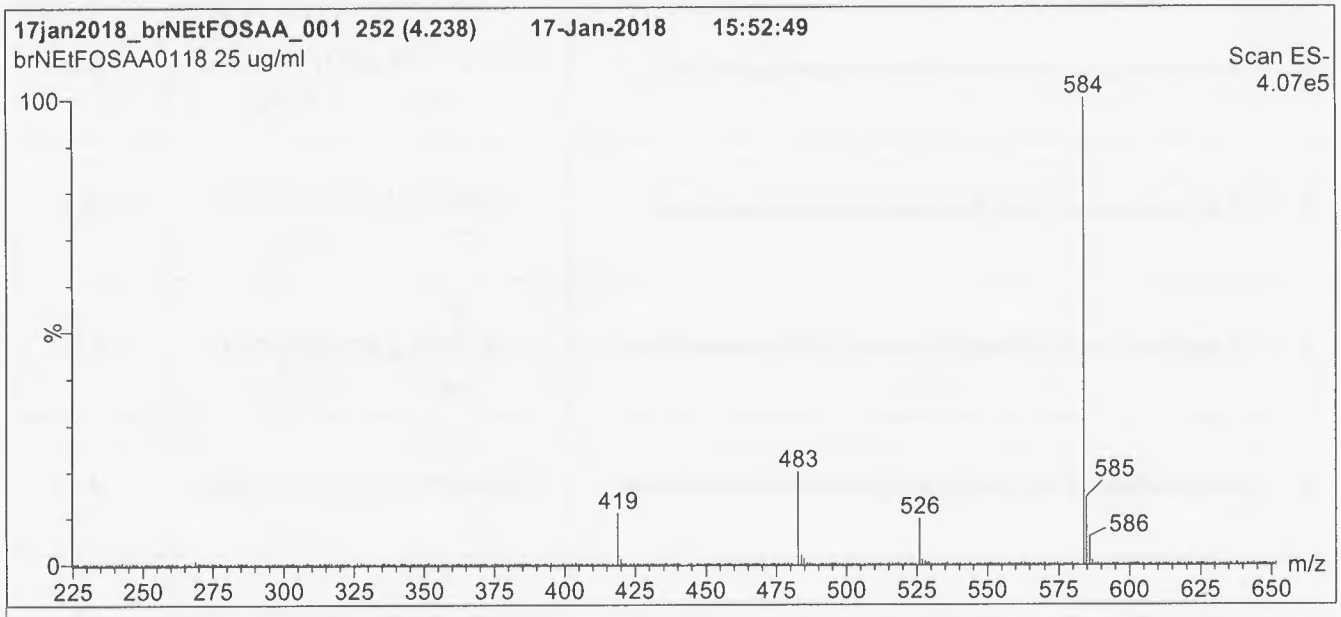
* Percent of total N-ethylperfluorooctanesulfonamidoacetic acid isomers only.

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

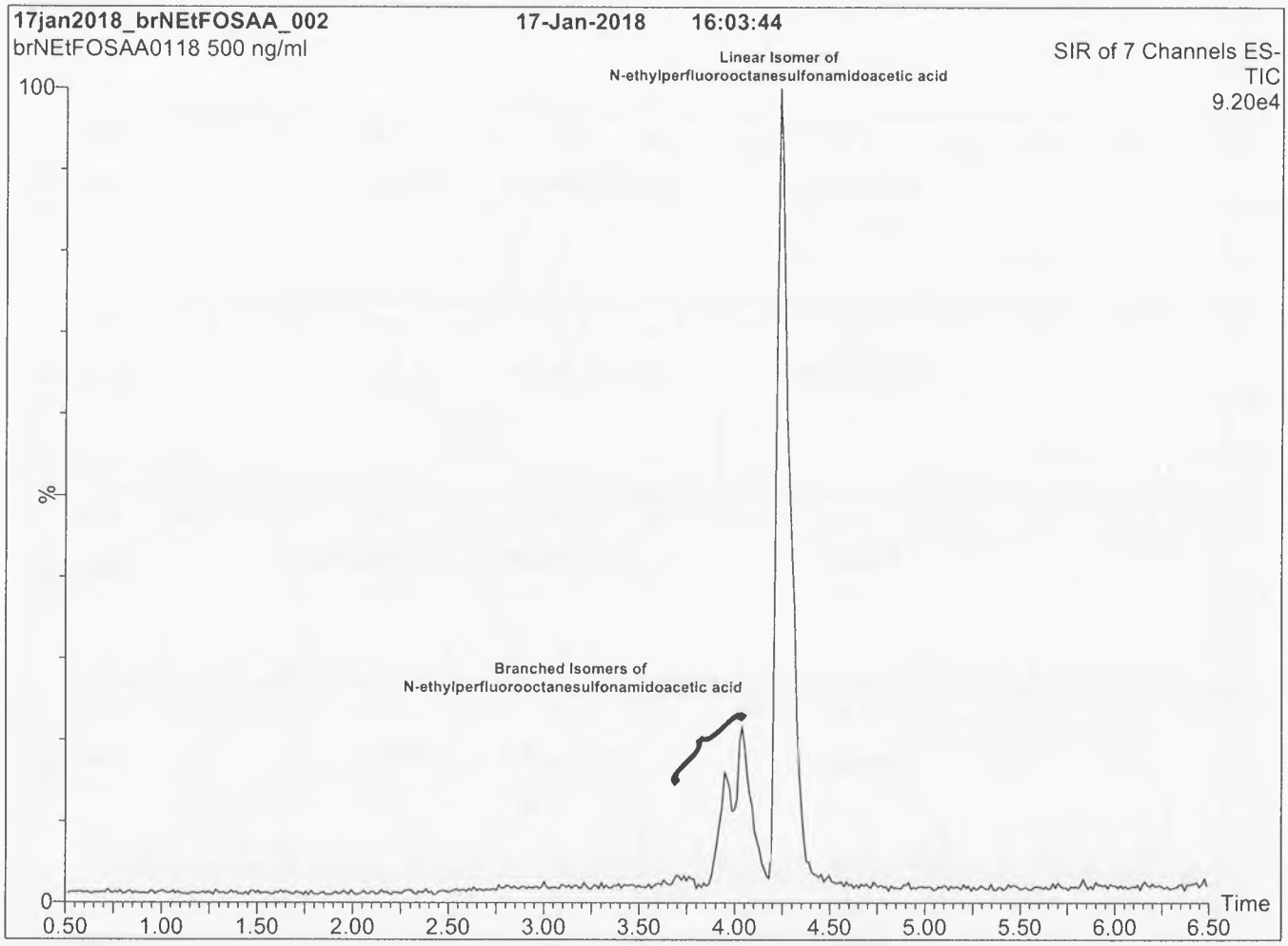
Flow: 300 µl/min

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

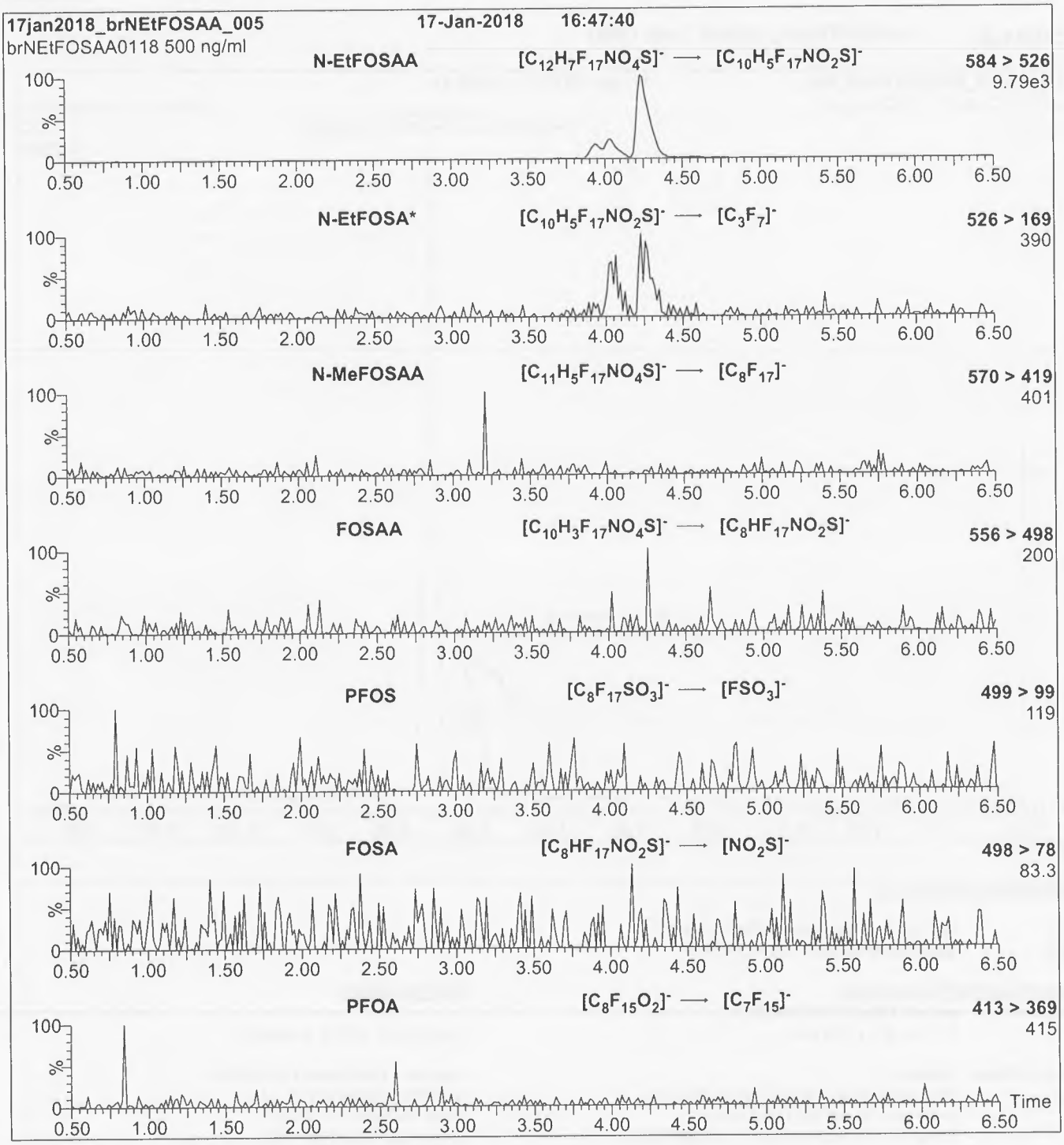
Flow: 300 µl/min

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)***

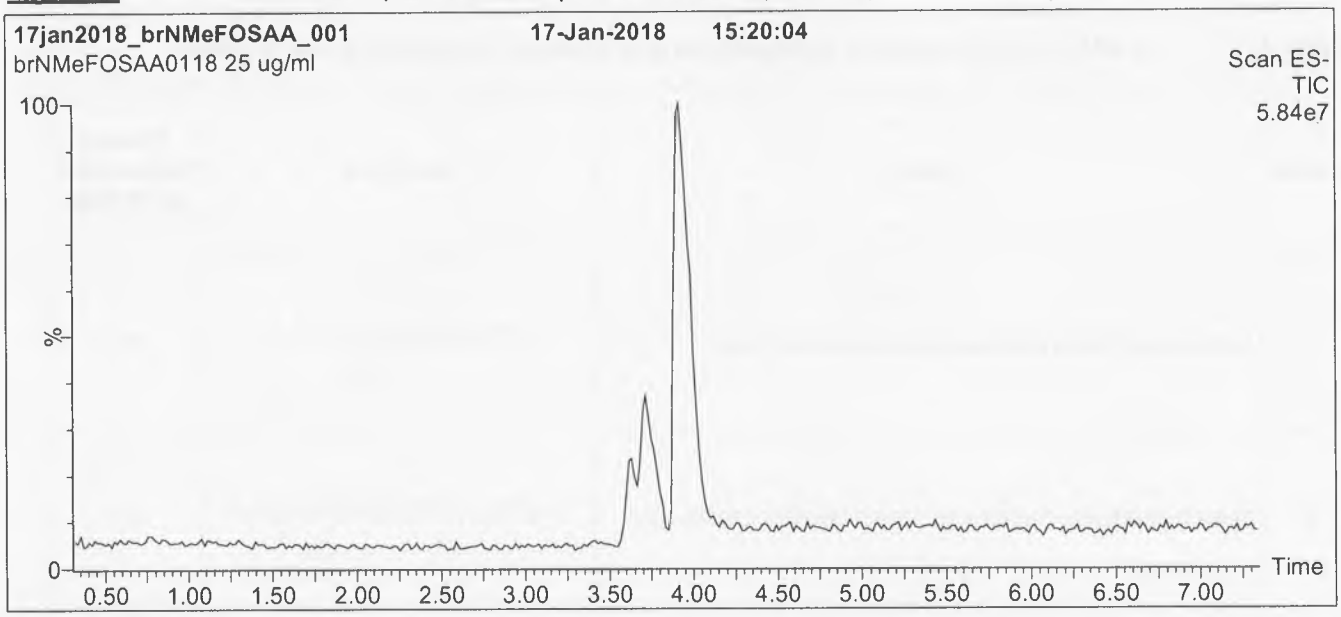
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	N-methylperfluoro-1-octanesulfonamidoacetic acid	$CF_3(CF_2)_7SO_2N(CH_3)CH_2CO_2H$	76.0
2	N-methylperfluoro-3-methylheptanesulfonamidoacetic acid	$CF_3(CF_2)_3CF(CF_3)(CF_2)_2SO_2N(CH_3)CH_2CO_2H$	0.7
3	N-methylperfluoro-4-methylheptanesulfonamidoacetic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

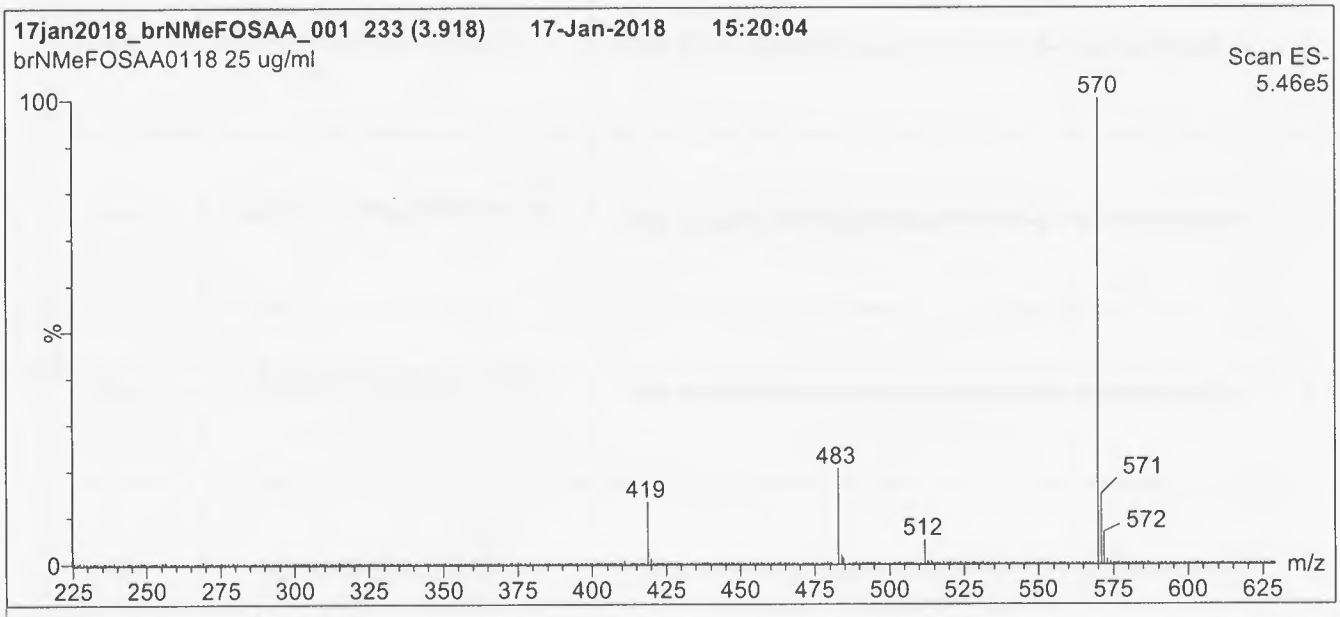
* Percent of total N-methylperfluorooctanesulfonamidoacetic acid isomers only.

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

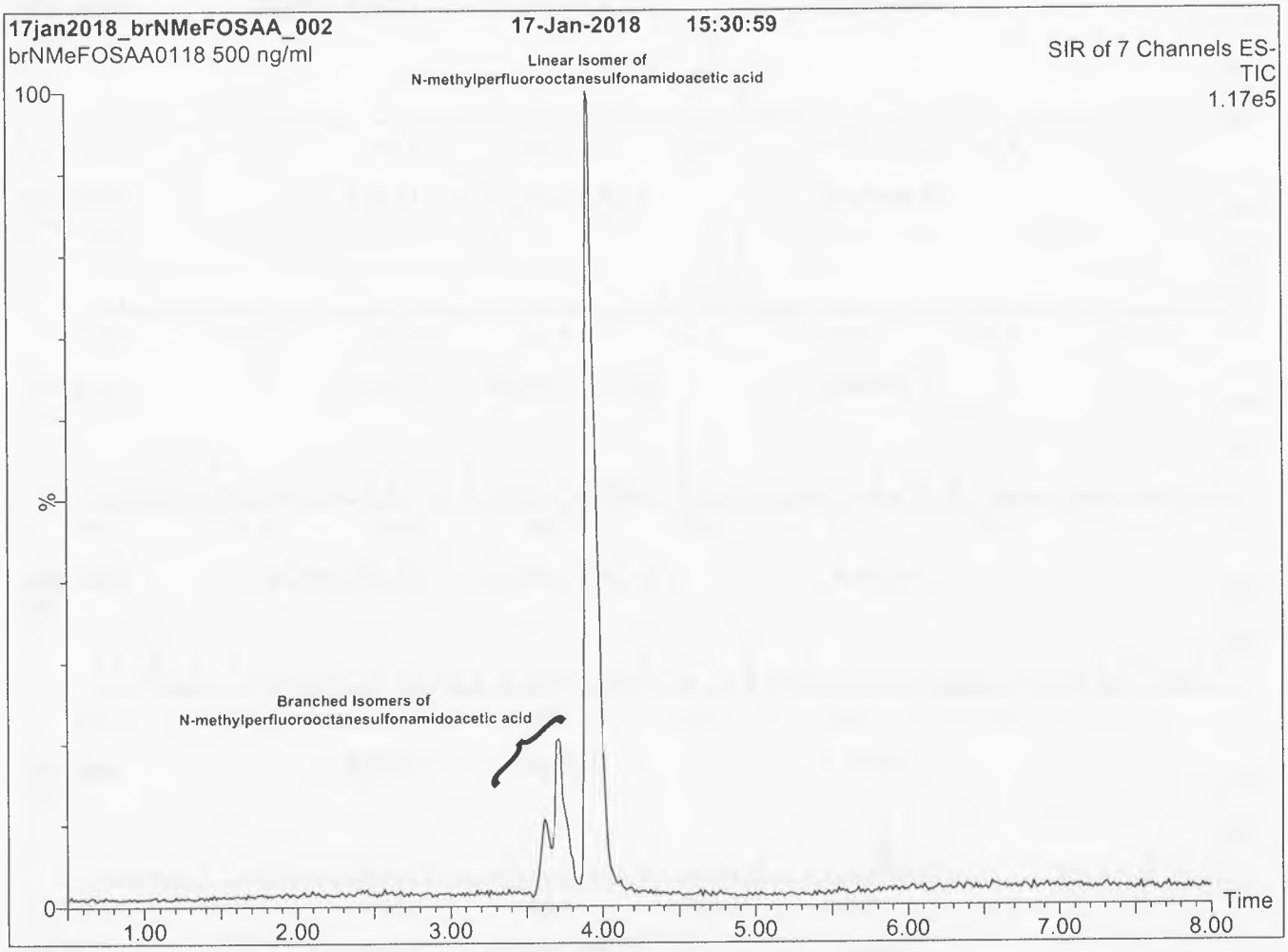
Flow: 300 µl/min

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

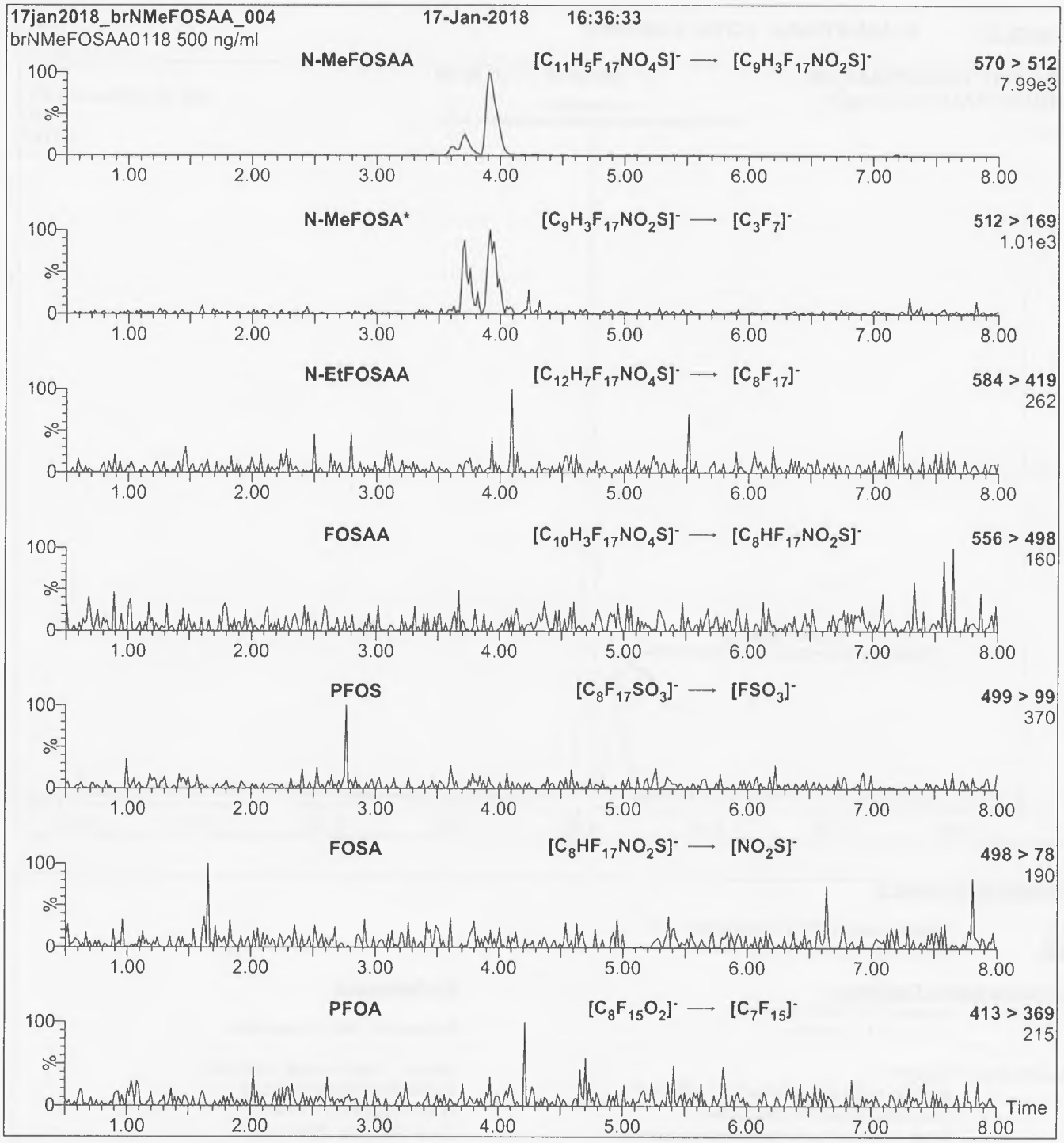
Flow: 300 µl/min

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:

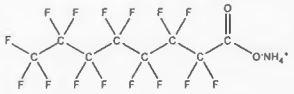
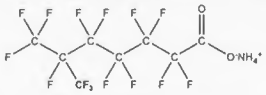
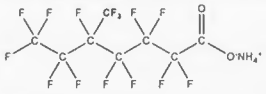
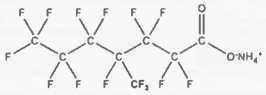
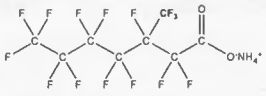
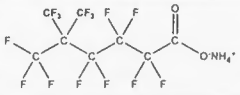
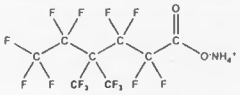
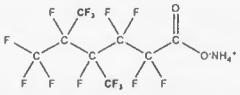
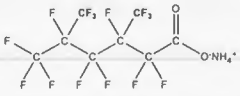
This product was produced using a Quality Management System registered to the latest versions of ISO 9001 by SAI Global, ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA; A 1226), and ISO GUIDE 34 by ANSI-ASQ National Accreditation Board (ANAB; AR-1523).

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

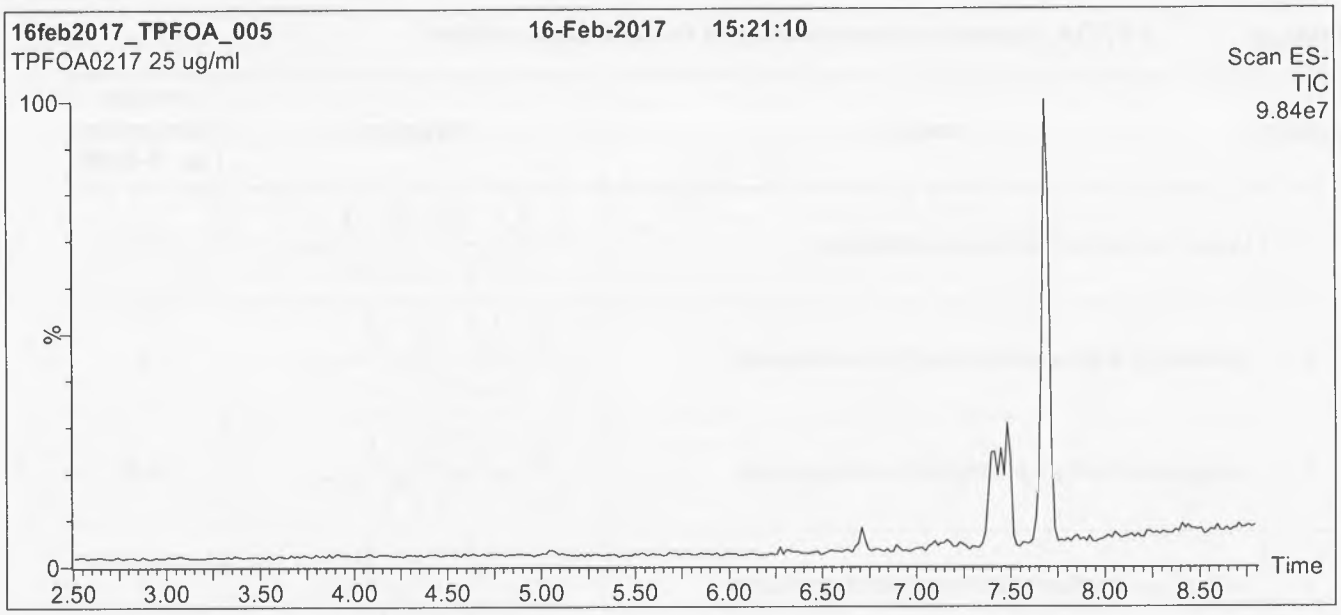
Table A: **T-PFOA; Isomeric Components and Percent Composition***

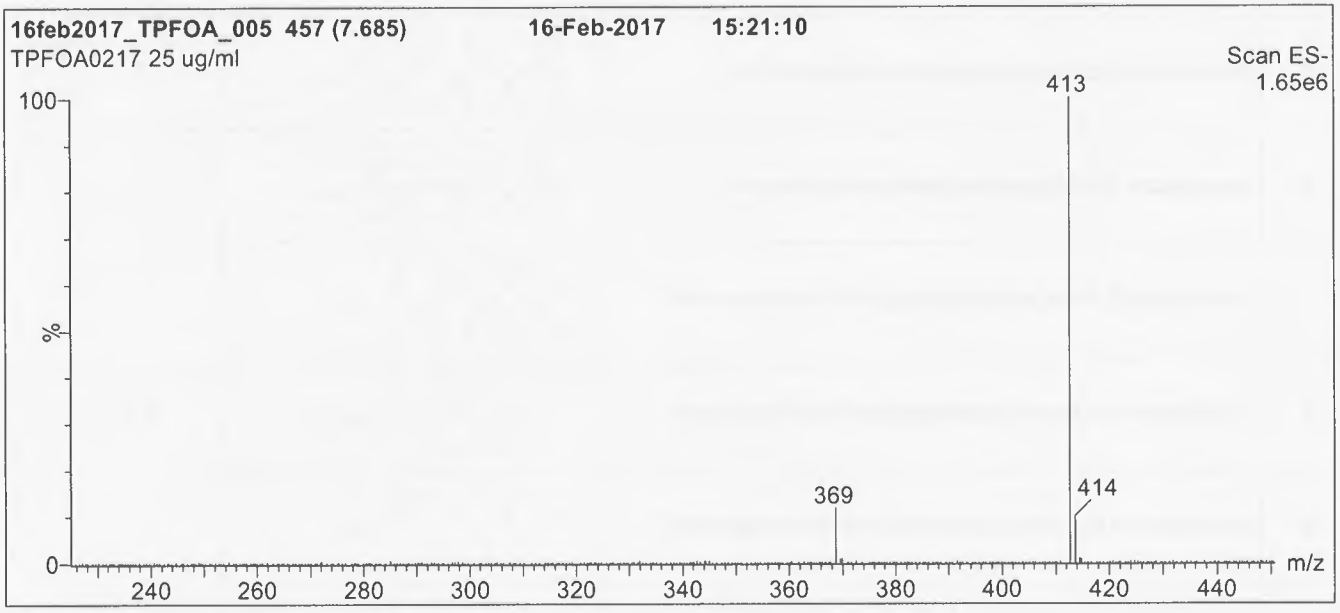
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Linear ammonium perfluoro-n-octanoate		79
2	Ammonium 6-trifluoromethylperfluoroheptanoate		9
3	Ammonium 5-trifluoromethylperfluoroheptanoate		4.5
4	Ammonium 4-trifluoromethylperfluoroheptanoate		4
5	Ammonium 3-trifluoromethylperfluoroheptanoate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

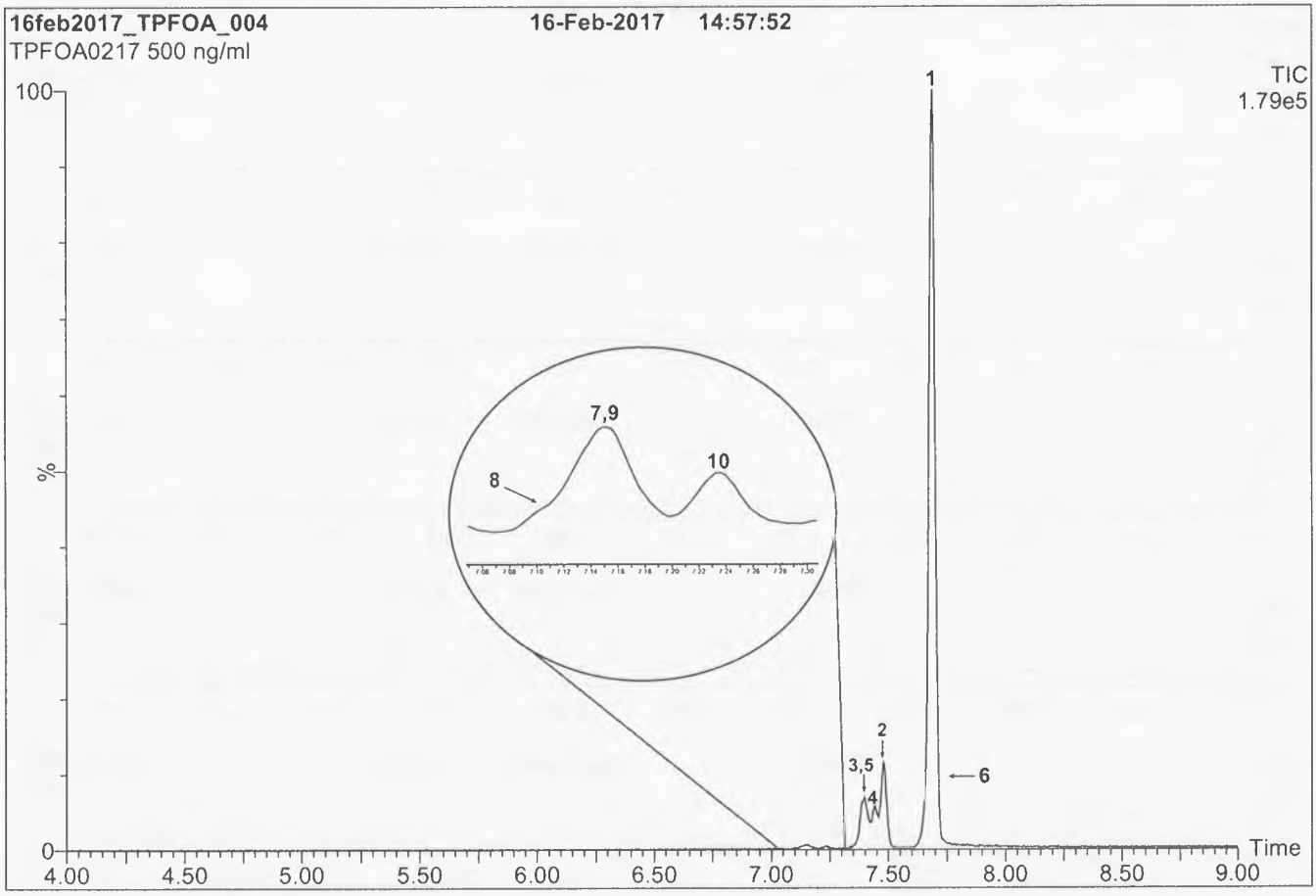
Flow: 1.0 ml/min

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

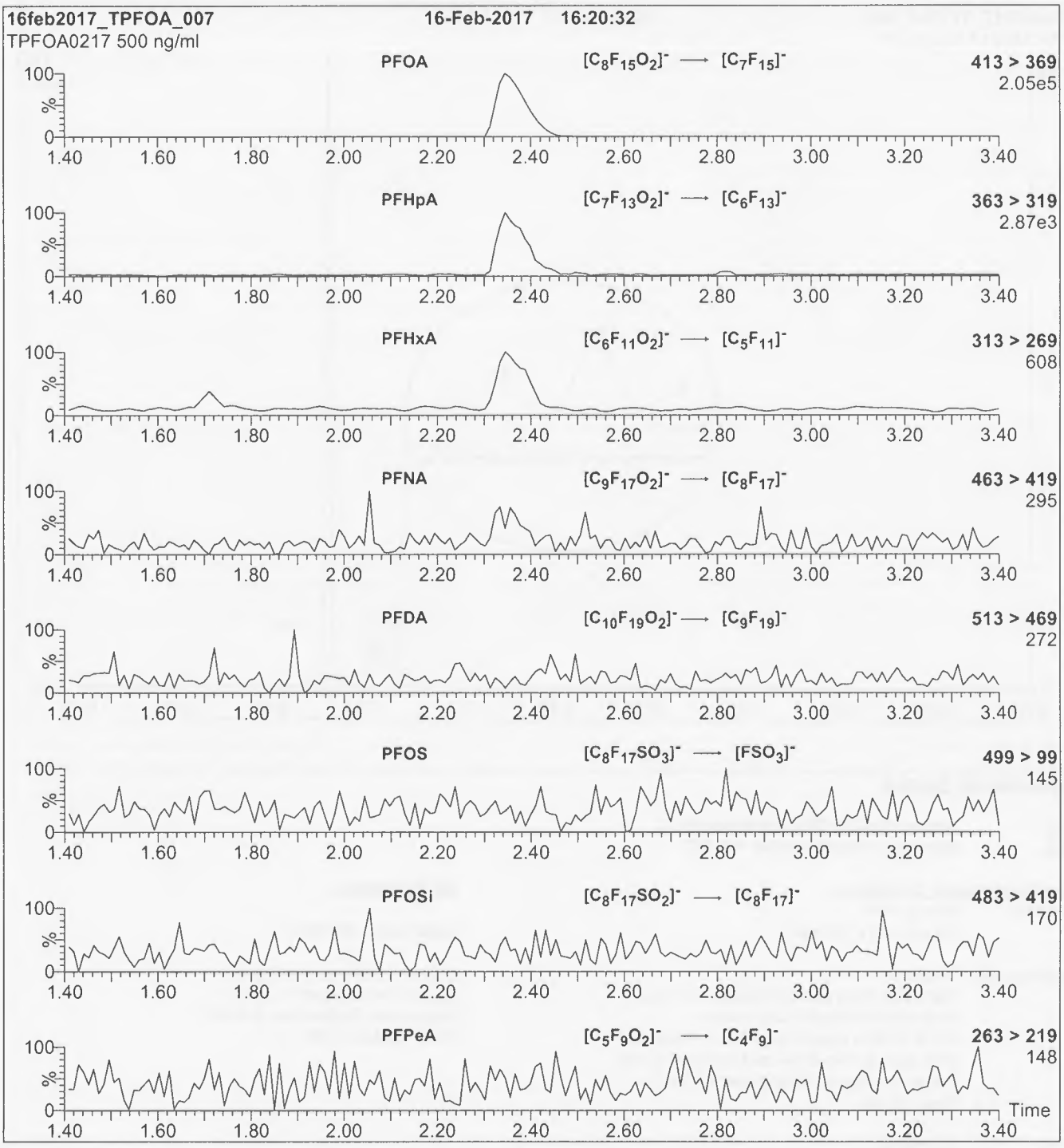
Flow: 1.0 ml/min

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)

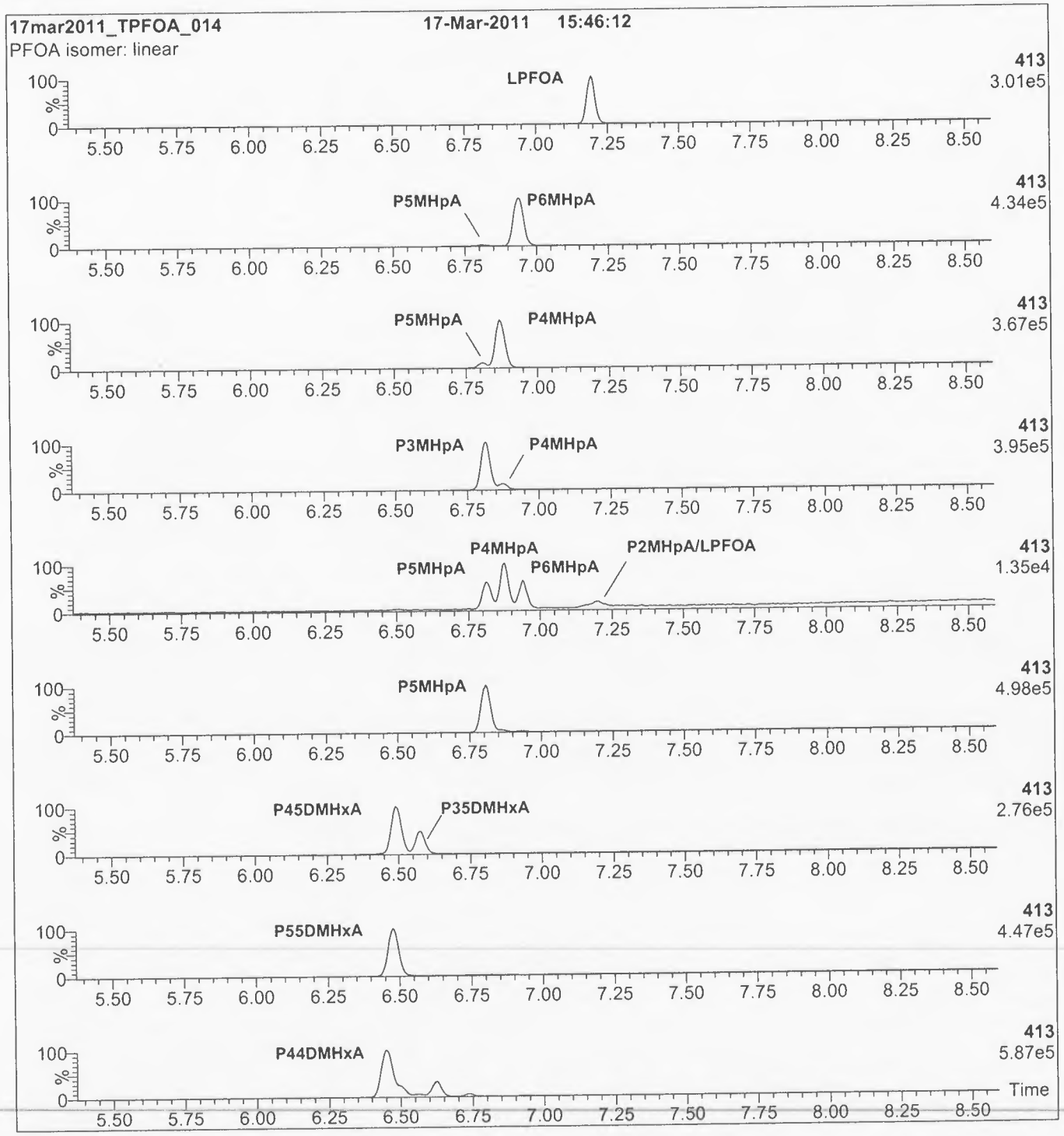
Mobile phase: Isocratic 80% (80:20 MeOH:ACN) / 20% H_2O
(both with 10 mM NH_4OAc buffer)

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

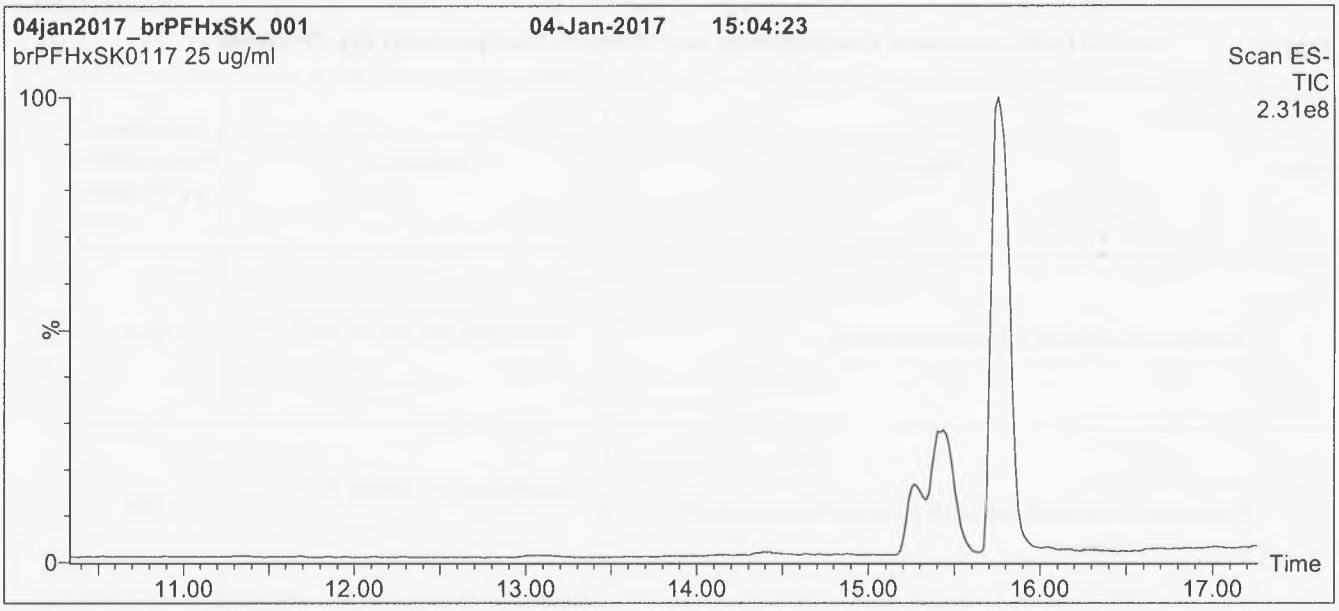
Table A: **br-PFHxSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

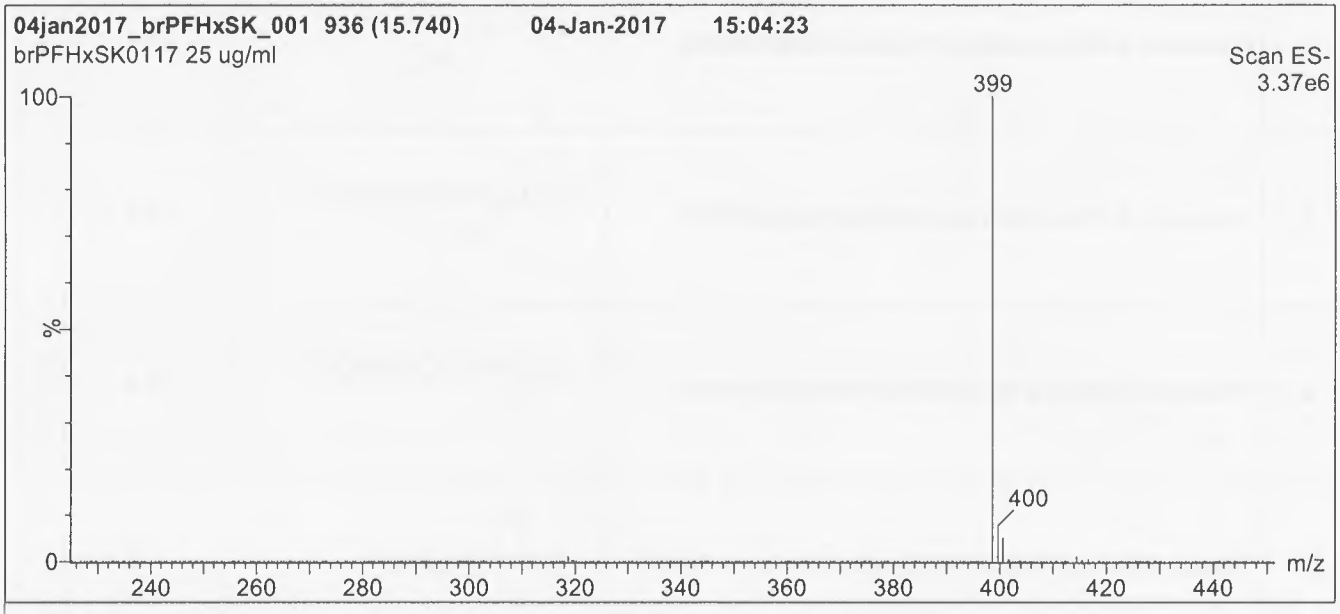
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-hexanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	81.1
2	Potassium 1-trifluoromethylperfluoropentanesulfonate**	$CF_3CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	2.9
3	Potassium 2-trifluoromethylperfluoropentanesulfonate	$CF_3CF_2CF_2CF(CF_3)CF_2SO_3^-K^+$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

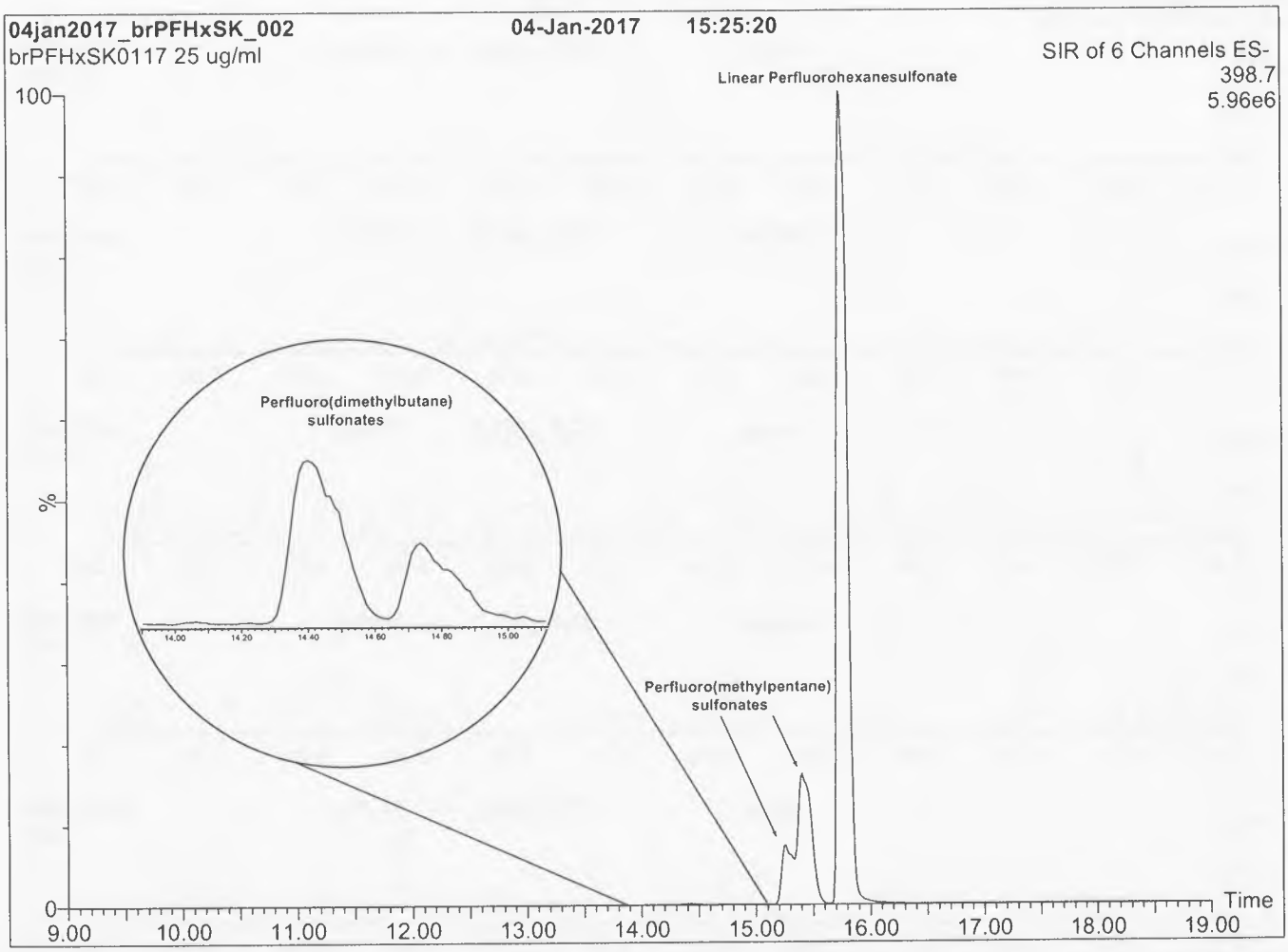
Flow: 300 µl/min

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

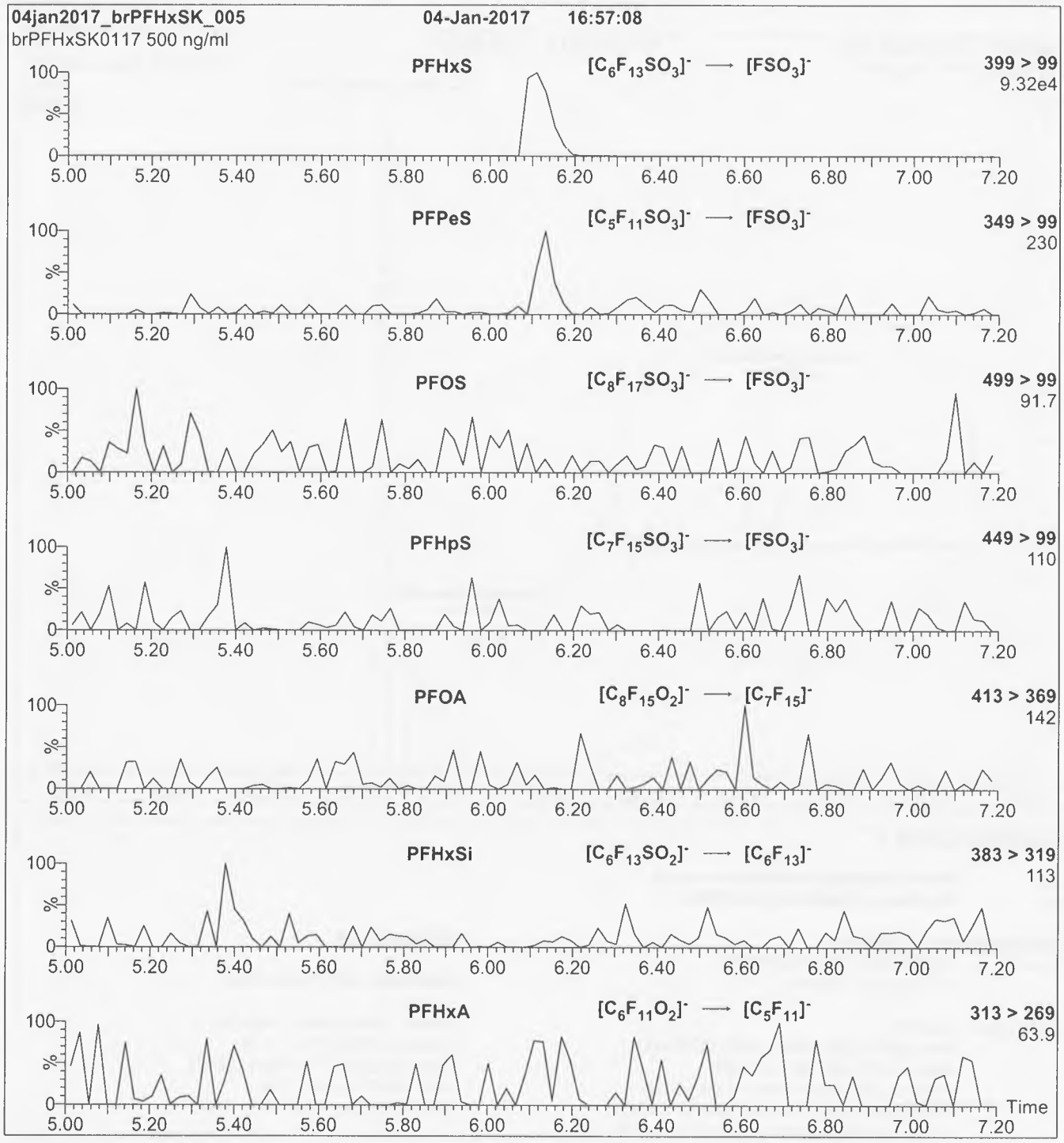
Flow: 300 µl/min

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

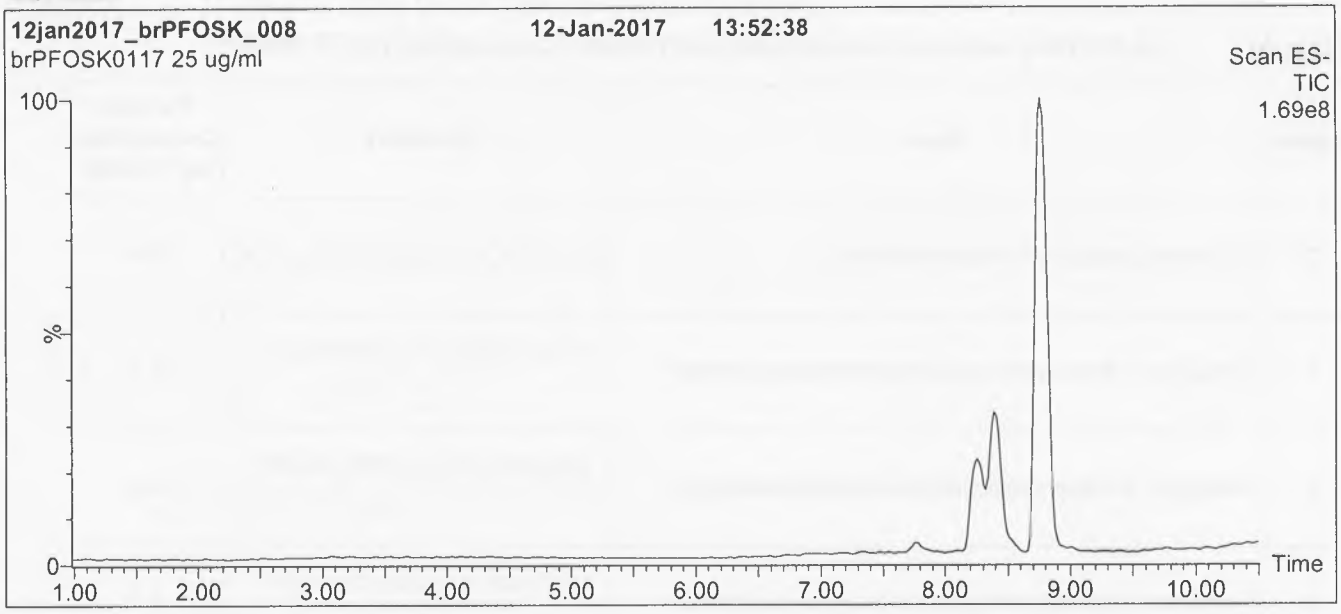
Table A: **br-PFOSK; Isomeric Components and Percent Composition (by ^{19}F-NMR)***

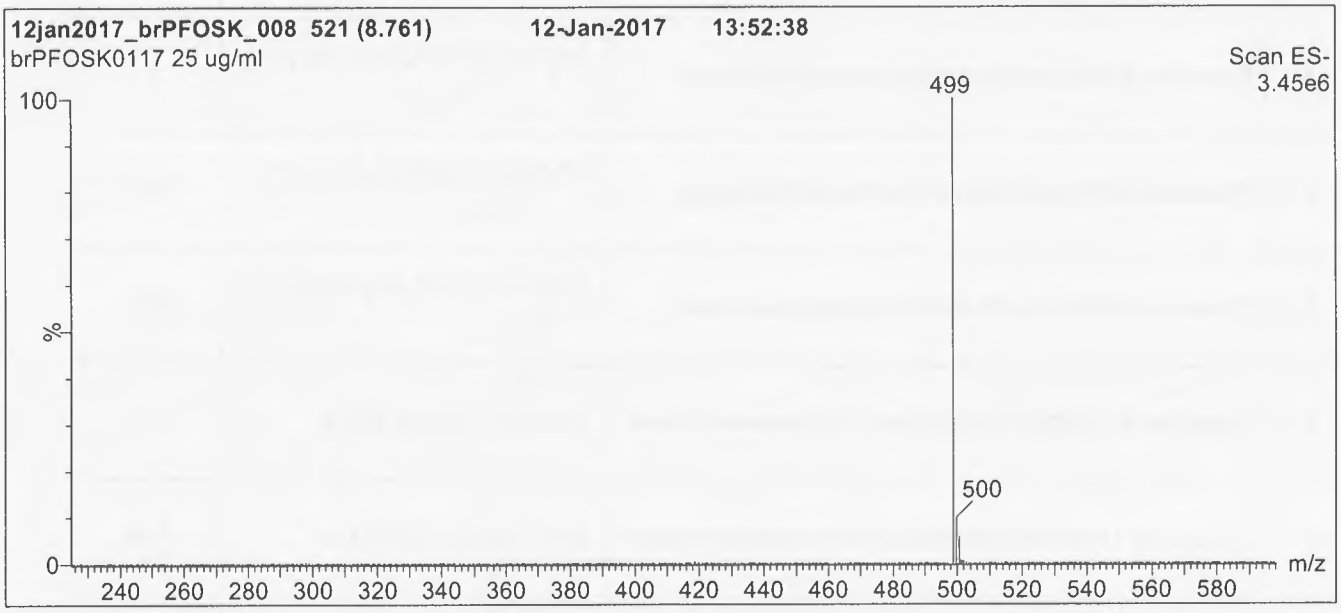
Isomer	Name	Structure	Percent Composition by ^{19}F-NMR
1	Potassium perfluoro-1-octanesulfonate	$CF_3CF_2CF_2CF_2CF_2CF_2CF_2CF_2SO_3^-K^+$	78.8
2	Potassium 1-trifluoromethylperfluoroheptanesulfonate**	$CF_3CF_2CF_2CF_2CF_2CF_2CF(CF_3)SO_3^-K^+$	1.2
3	Potassium 2-trifluoromethylperfluoroheptanesulfonate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

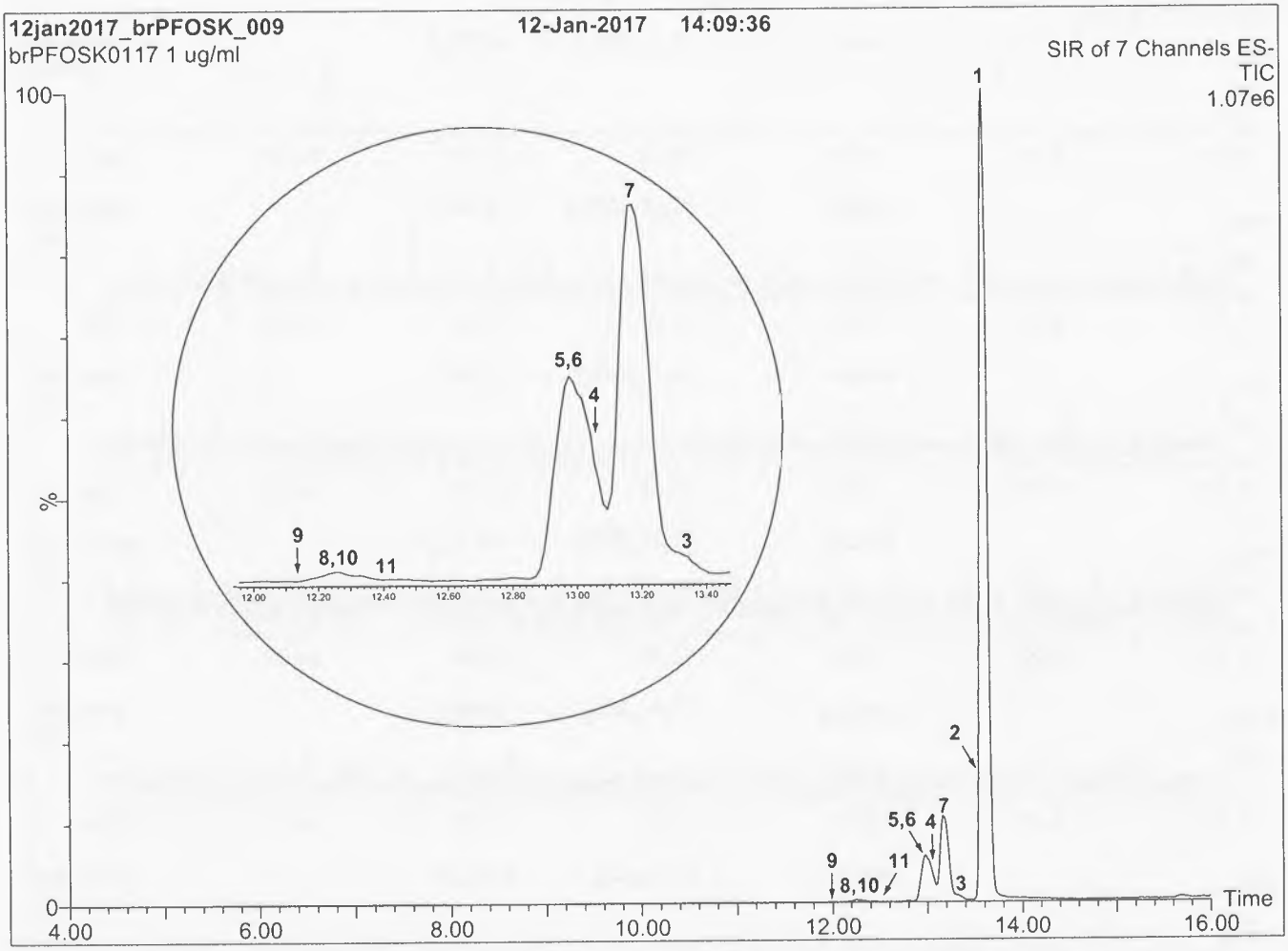
Flow: 300 µl/min

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**

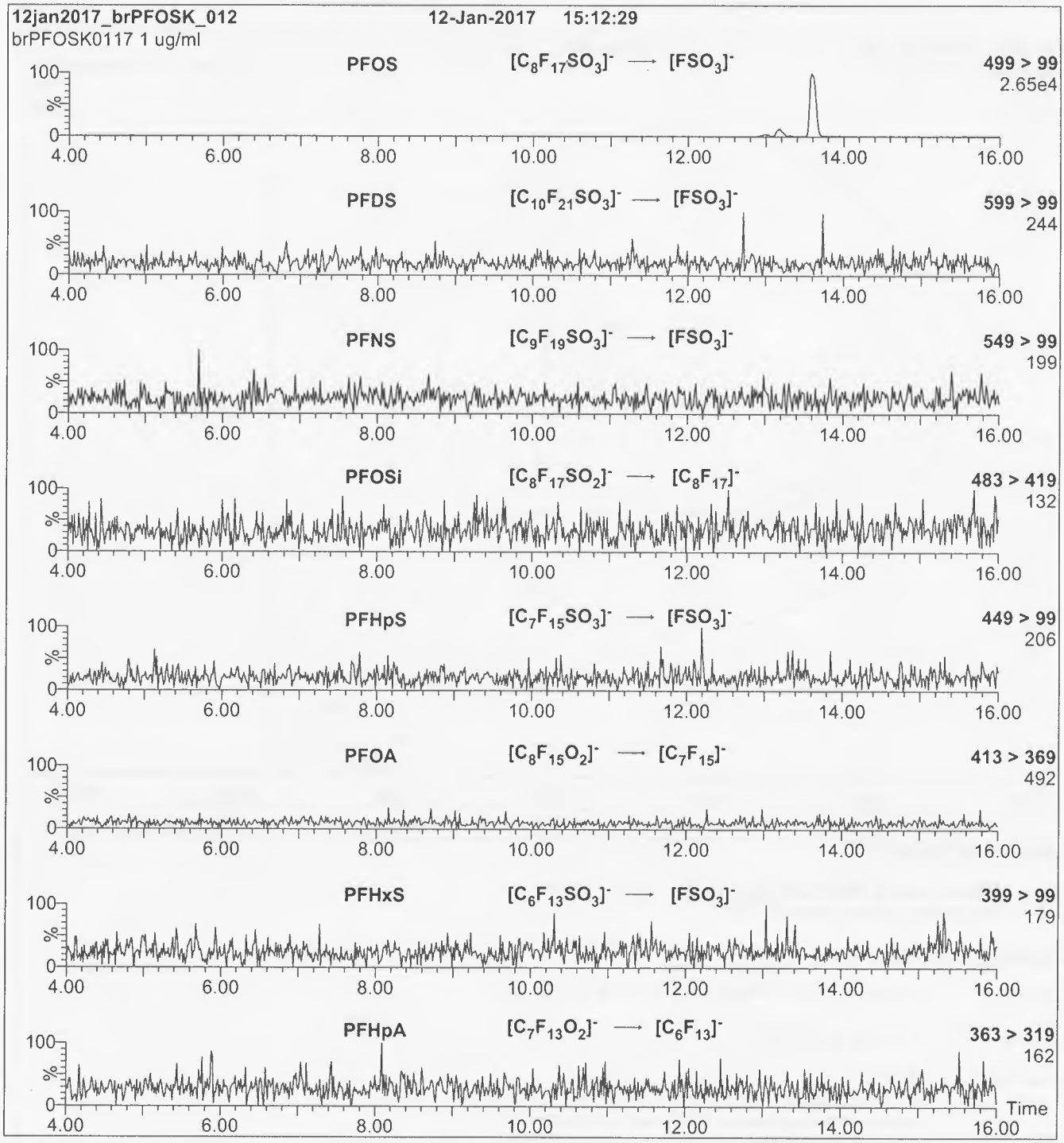
Chromatographic Conditions:

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

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

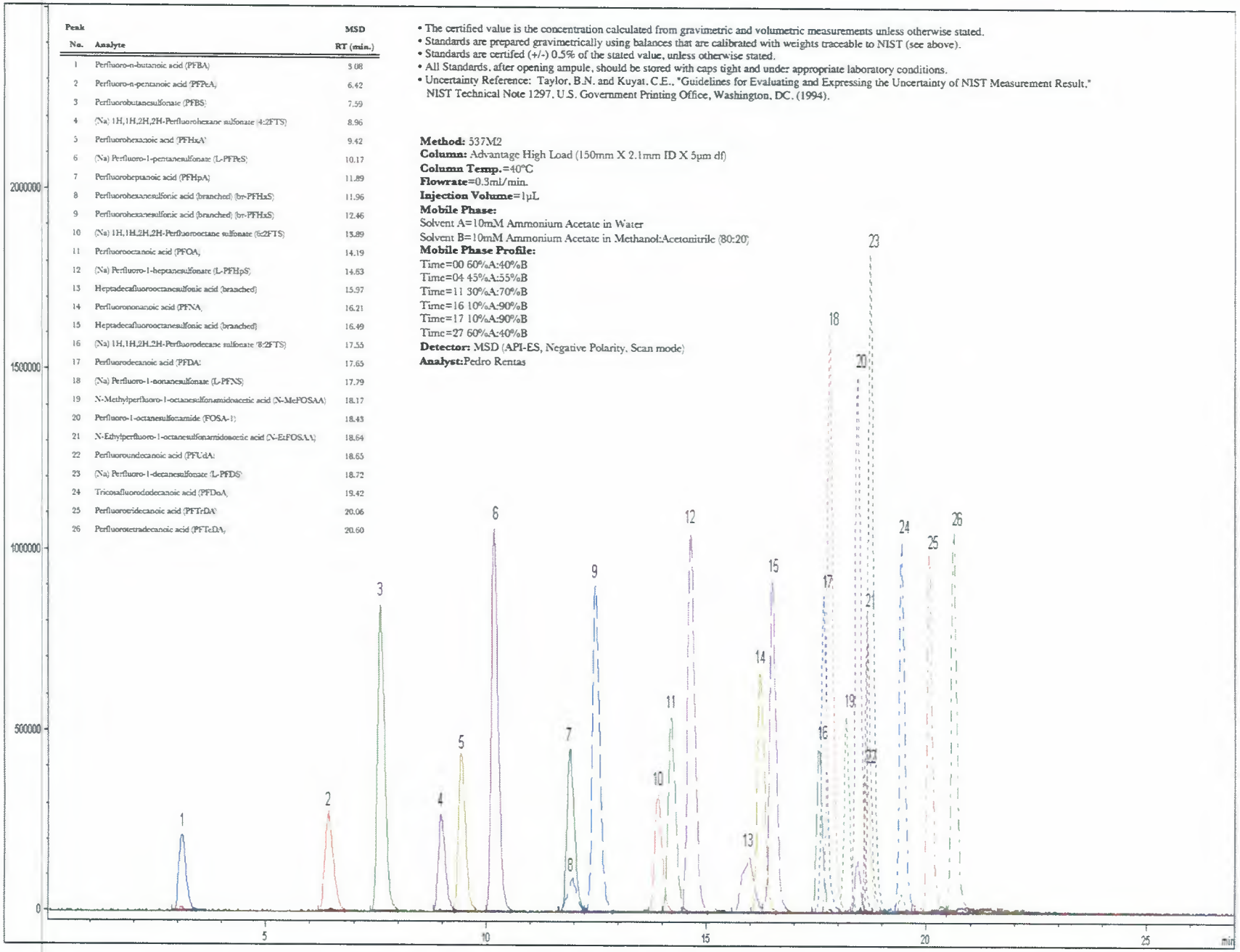
Note: All assigned values are anion concentrations.

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

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

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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

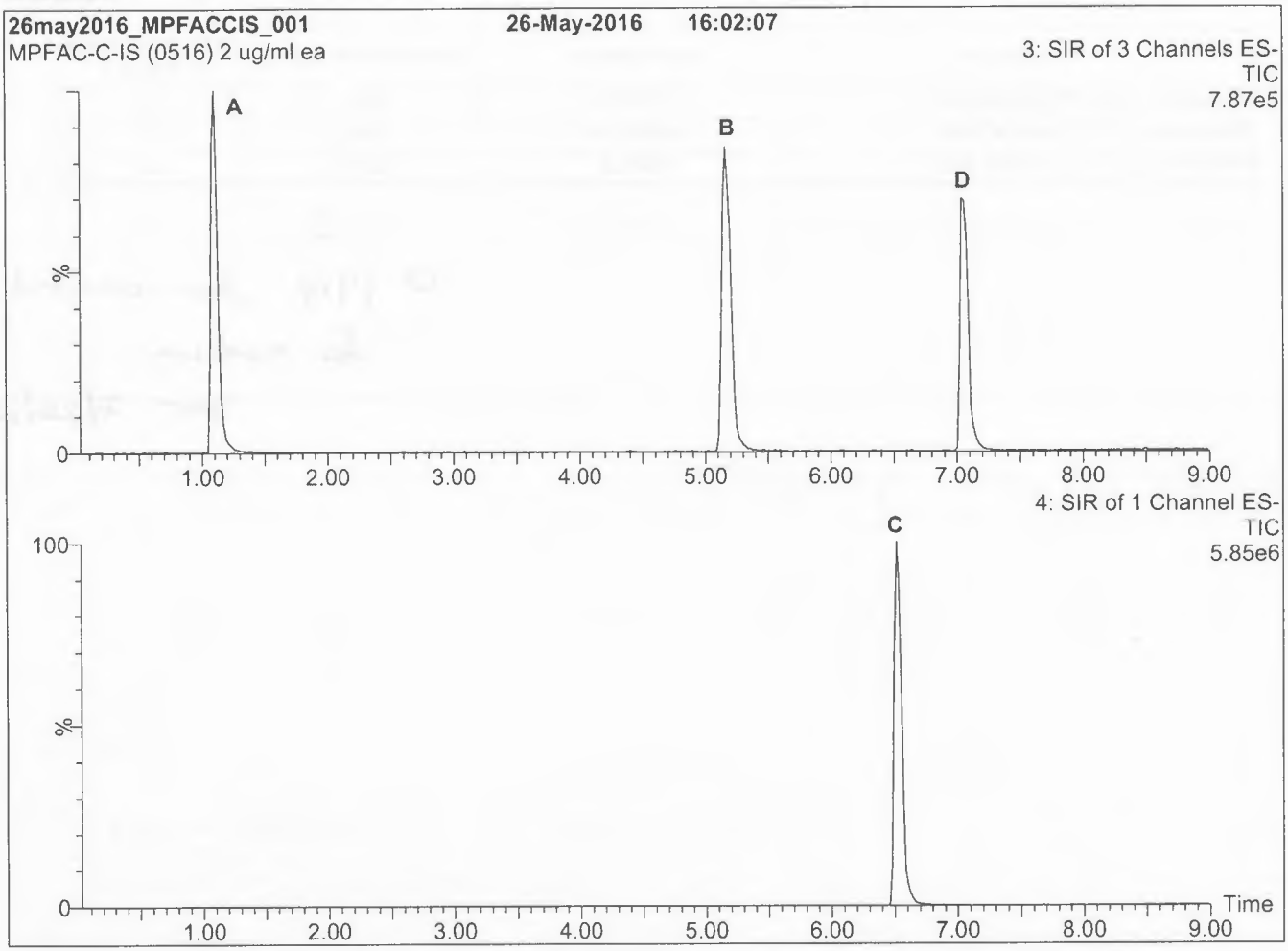
Table A: **MPFAC-C-IS; Components and Concentrations (ng/ml; ± 5% in Methanol / Water (<1%))**

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
JMT 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

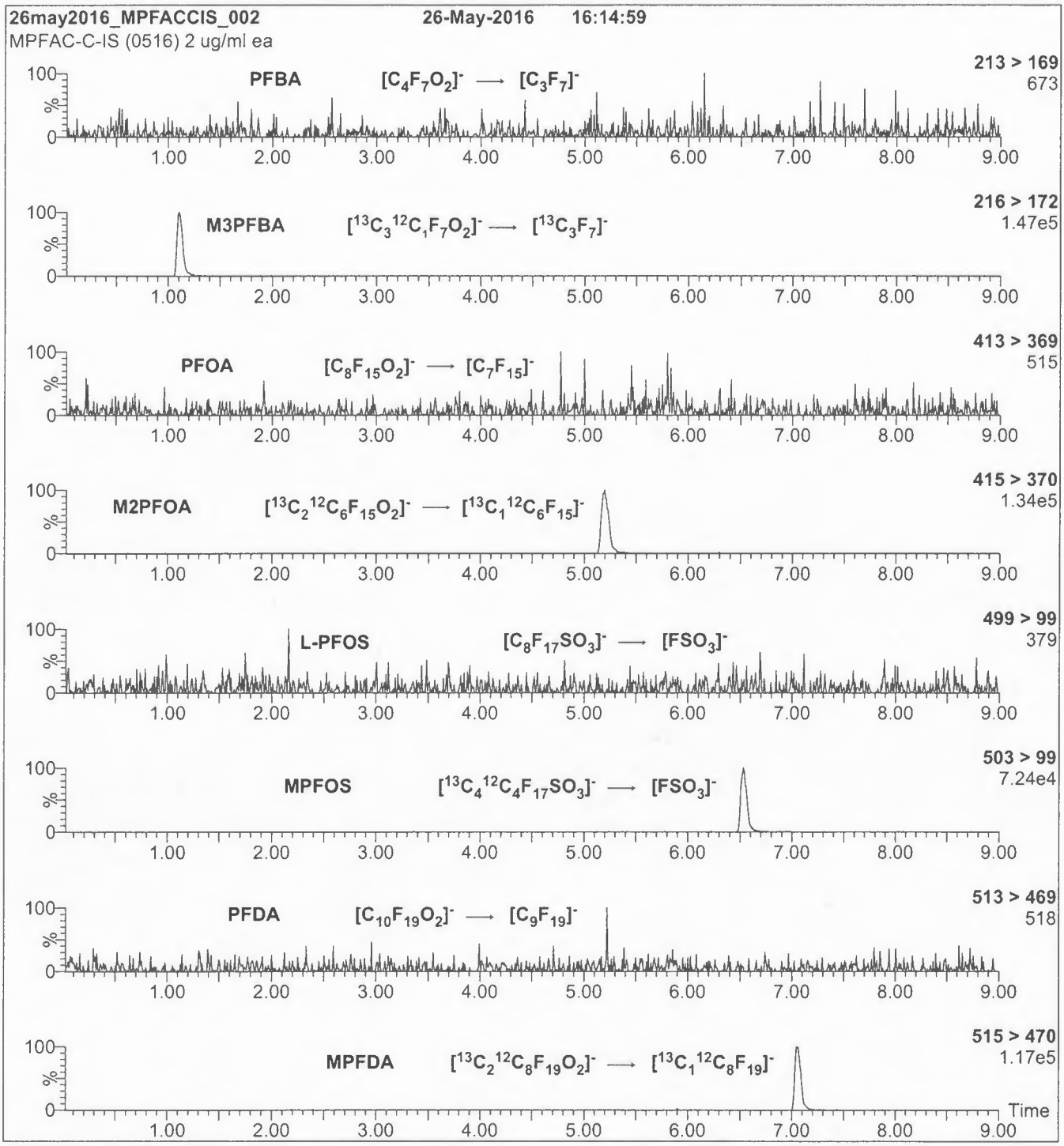
Flow: 300 µl/min

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%))**

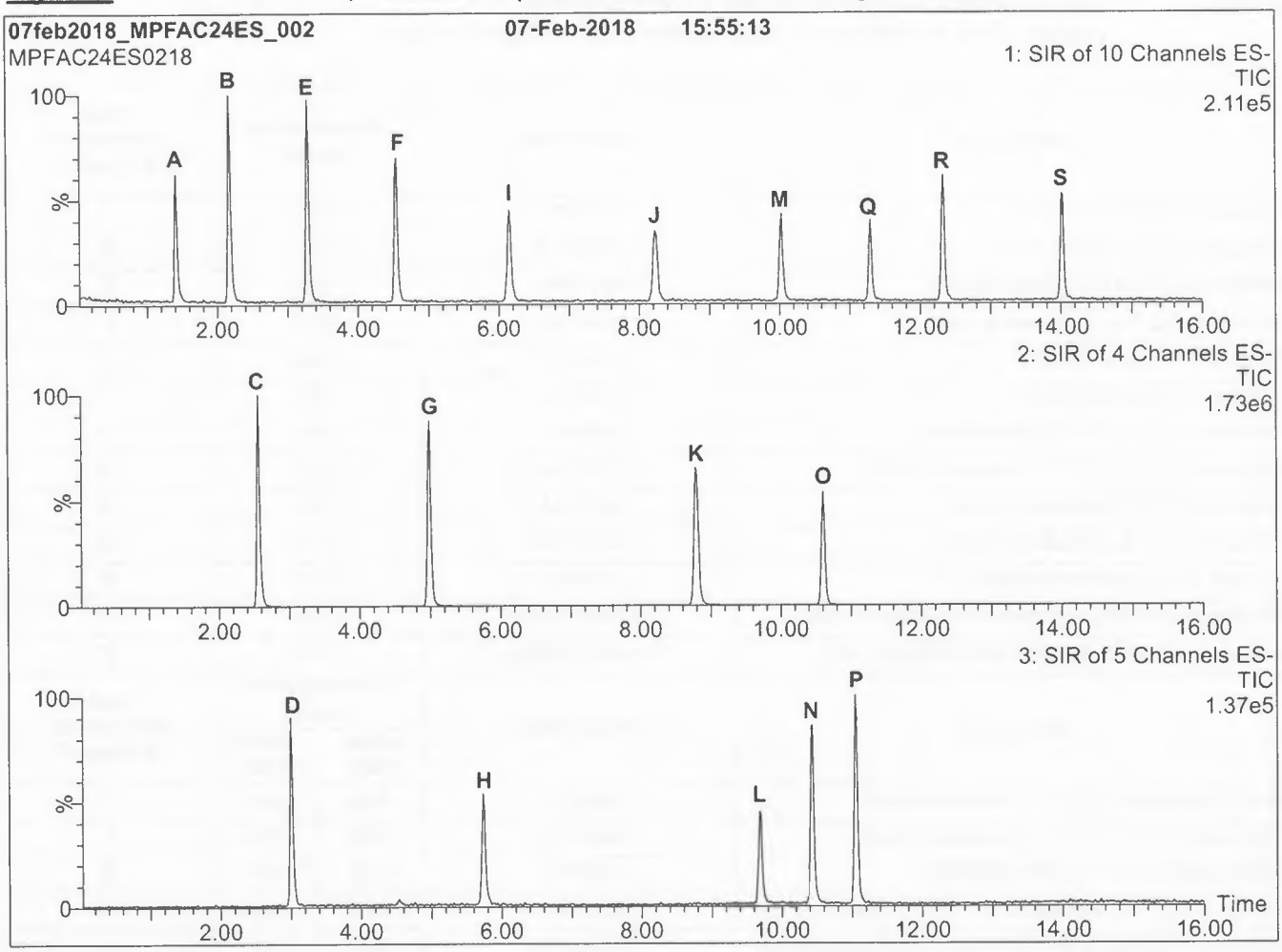
Compound	Abbreviation	Concentration (ng/ml)	Peak Assignment in Figure 1
Perfluoro-n-[$^{13}C_4$]butanoic acid	MPFBA	1000	A
Perfluoro-n-[$^{13}C_5$]pentanoic acid	M5PFPeA	1000	B
Perfluoro-n-[1,2,3,4,6-$^{13}C_5$]hexanoic acid	M5PFHxA	1000	E
Perfluoro-n-[1,2,3,4-$^{13}C_4$]heptanoic acid	M4PFHpA	1000	F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

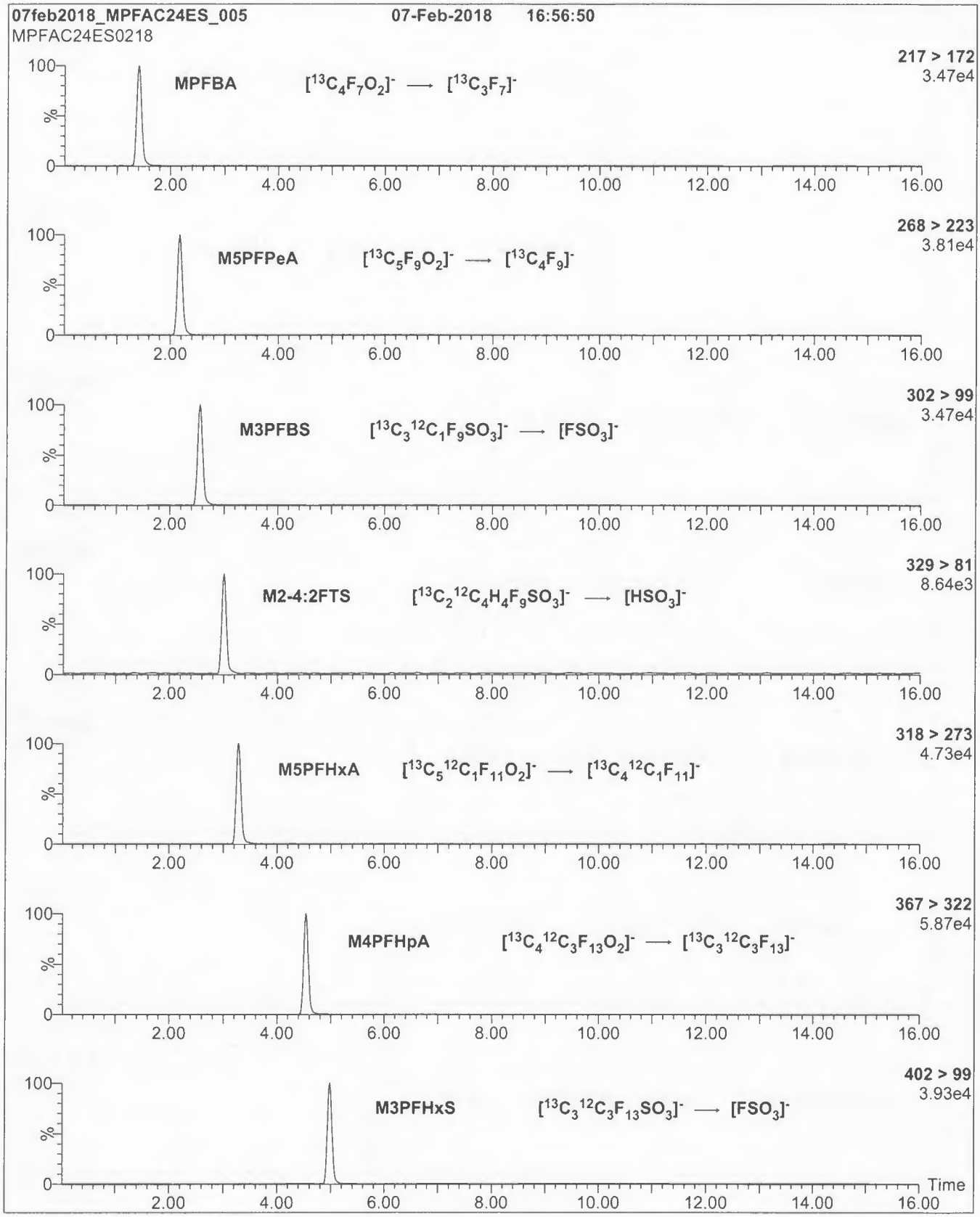


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**

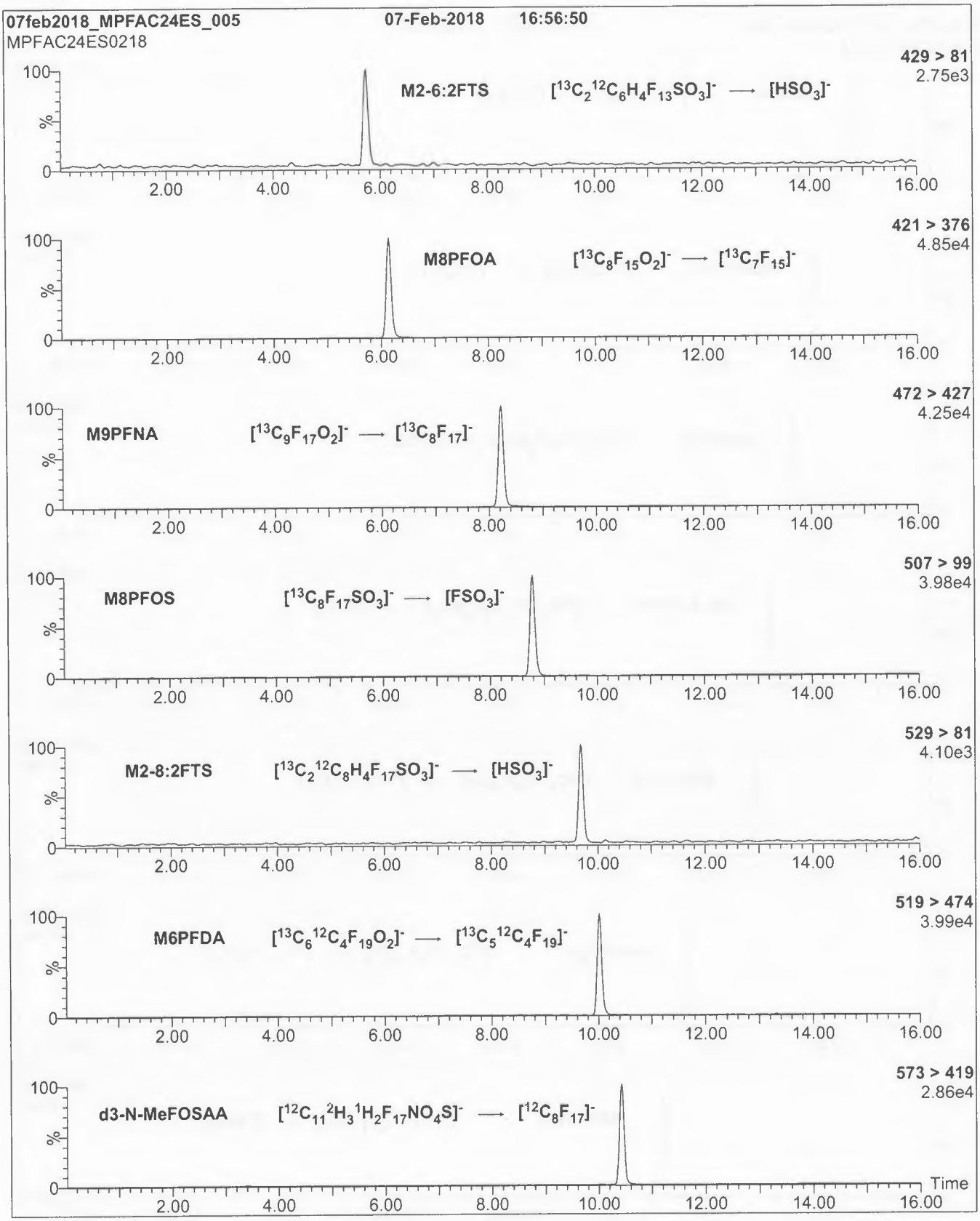
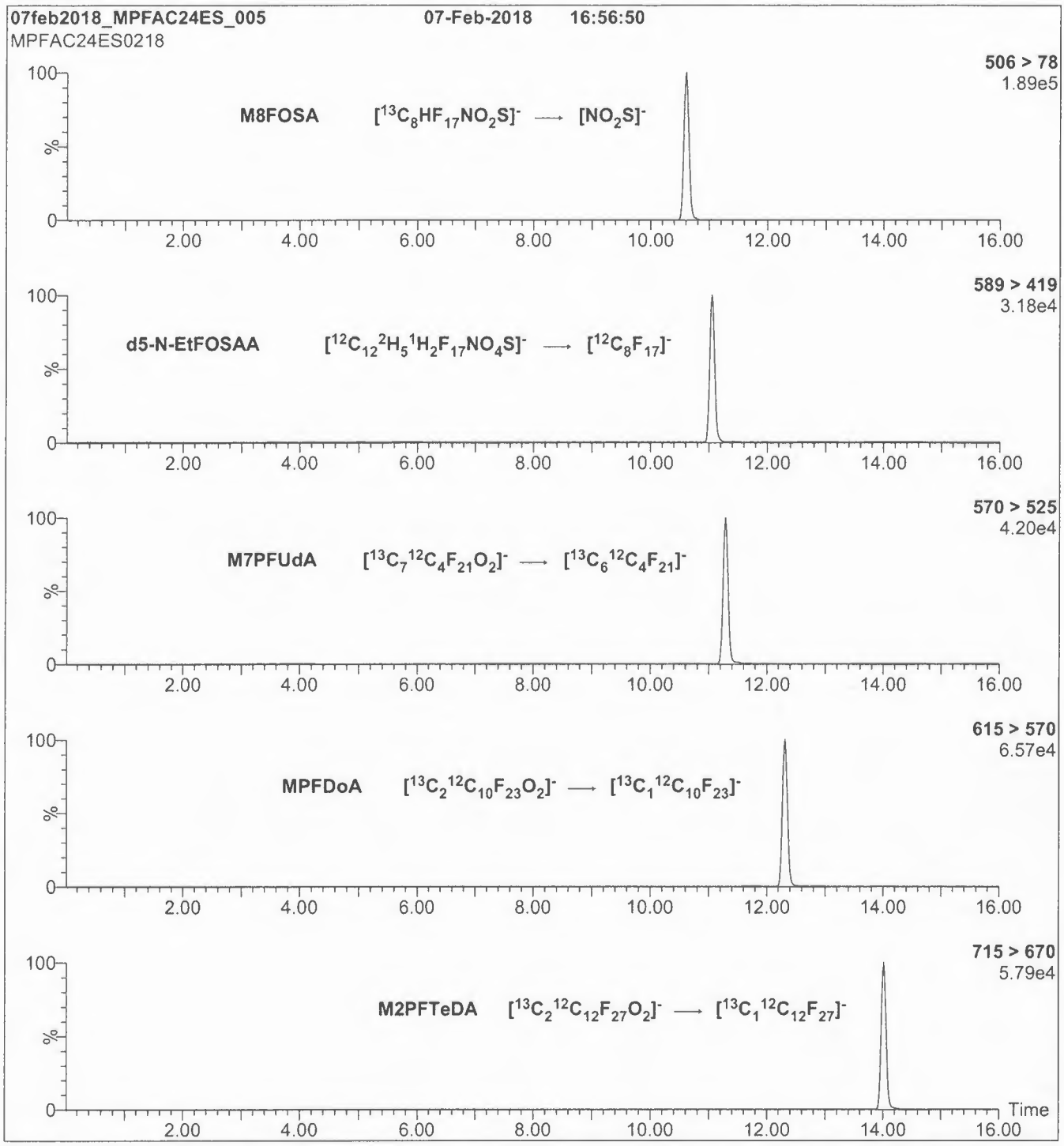


Figure 2: **MPFAC-24ES; LC/MS/MS Data (Selected MRM Transitions)**



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%)

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

5E-05 Balance Uncertainty
0.007 Flask Uncertainty

Eli Aliaga 092018
Formulated By: Eli Aliaga DATE

Pedro Rentas 092018
Reviewed By: Pedro L. Rentas DATE

Note: All assigned values are anion concentrations.

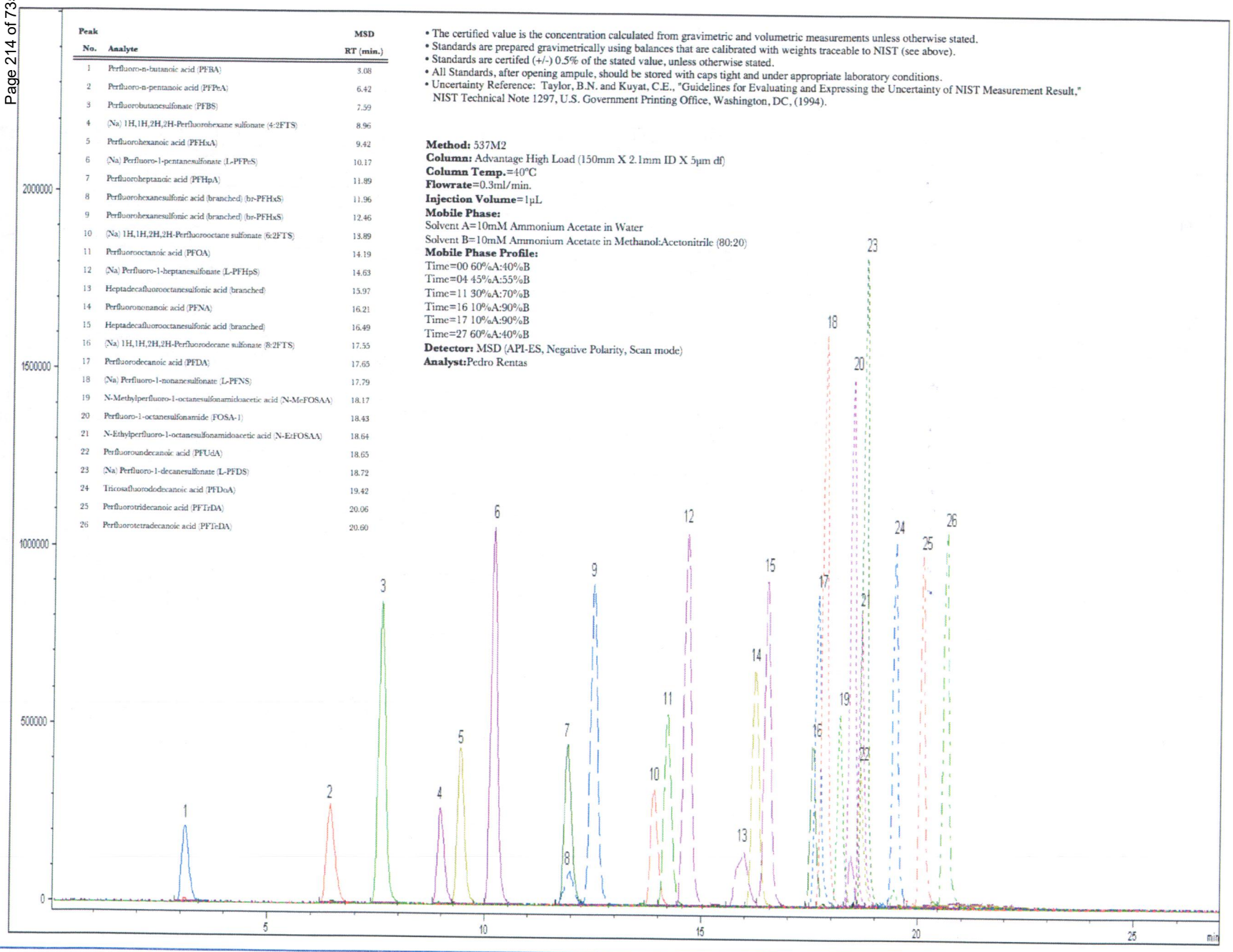
2nd Source

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Initial Conc.(µg/mL)	Final Conc.(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1.	Perfluoro-n-butanoic acid (linear)	99542	110317	0.02	1.00	0.004	50.2	1.00	0.01	375-22-4	N/A	N/A
2.	Perfluoro-n-pentanoic acid	99543	110317	0.02	1.00	0.004	50.7	1.01	0.01	2706-90-3	N/A	N/A
3.	Perfluorohexanoic acid	99199	030617	0.02	1.00	0.004	50.3	1.01	0.01	307-24-4	N/A	N/A
4.	Perfluoroheptanoic acid	99197	030517	0.02	1.00	0.004	50.1	1.00	0.01	375-85-9	N/A	N/A
5.	Perfluorooctanoic acid	99202	030617	0.02	1.00	0.004	50.2	1.00	0.01	335-67-1	N/A	ipr-rat 189mg/kg
6.	Perfluorononanoic acid	99200	030617	0.02	1.00	0.004	50.1	1.00	0.01	375-95-1	N/A	N/A
7.	Perfluorodecanoic acid	99195	030617	0.02	1.00	0.004	50.1	1.00	0.01	335-76-2	N/A	orl-rat 57mg/kg
8.	Perfluoroundecanoic acid	99205	030617	0.02	1.00	0.004	50.1	1.00	0.01	2058-94-8	N/A	N/A
9.	Tricosafluorododecanoic acid	99196	030617	0.02	1.00	0.004	50.1	1.00	0.01	307-55-1	N/A	N/A
10.	Perfluorotridecanoic acid	99204	030617	0.02	1.00	0.004	50.1	1.00	0.01	72629-94-8	N/A	N/A
11.	Perfluorotetradecanoic acid	99203	030617	0.02	1.00	0.004	50.1	1.00	0.01	376-06-7	N/A	N/A
12.	Perfluoro-1-octanesulfonamide	3677	FOSA0618I	0.02	1.00	0.004	50.0	1.00	0.01	754-91-6	N/A	N/A
13.	N-Methylperfluoro-1-octanesulfonamidoacetic acid	3667	NMeFOSAA0118	0.02	1.00	0.004	50.0	1.00	0.01	2355-31-9	N/A	N/A
14.	N-Ethylperfluoro-1-octanesulfonamidoacetic acid	3664	NEtFOSAA0118	0.02	1.00	0.004	50.0	1.00	0.01	2991-50-6	N/A	N/A
15.	Perfluorobutanesulfonic acid	99194	031017	0.02	1.00	0.004	50.7	1.01	0.01	375-73-5	N/A	N/A
•16.	Perfluoro-1-pentanesulfonate	99544	111017	0.02	0.98	0.004	51.3	1.00	0.01	630402-22-1	N/A	N/A
•17.	Perfluorohexanesulfonic acid (branched)	99198	030617	0.02	1.00	0.004	50.6	1.01	0.01	3871-99-6	N/A	N/A
18.	Perfluoro-1-heptanesulfonic acid	3672	LPFHpS0817	0.021	1.05	0.004	47.6	1.00	0.01	375-92-8	N/A	N/A
19.	Heptadecafluorooctanesulfonic acid (branched)	99201	030617	0.02	1.00	0.004	50.2	1.00	0.01	1763-23-1	N/A	N/A
20.	Perfluoro-1-nonanesulfonic acid	3957	LPFNS0718	0.021	1.05	0.004	48.0	1.01	0.01	98789-57-2	N/A	N/A
21.	Perfluoro-1-decanesulfonic acid	3671	LPFDS1117	0.021	1.05	0.004	48.2	1.01	0.01	2806-15-7	N/A	N/A
22.	1H,1H,2H,2H-Perfluorohexane sulfonic acid	3955	42FTS1216	0.0214	1.07	0.004	46.7	1.00	0.01	00-00-0	N/A	N/A
23.	1H,1H,2H,2H-Perfluorooctane sulfonic acid	3661	62FTS0616	0.021	1.05	0.004	47.4	1.00	0.01	27619-97-2	N/A	N/A
24.	1H,1H,2H,2H-Perfluorodecane sulfonic acid	3662	82FTS1216	0.021	1.05	0.004	47.9	1.01	0.01	39108-34-4	N/A	N/A

Peak No.	Analyte	MSD RT (min.)
1	Perfluoro-n-butanoic acid (PFBA)	3.08
2	Perfluoro-n-pentanoic acid (PFPeA)	6.42
3	Perfluorobutanesulfonate (PFBS)	7.59
4	(Na) 1H,1H,2H,2H-Perfluorohexane sulfonate (4:2FTS)	8.96
5	Perfluorohexanoic acid (PFHxA)	9.42
6	(Na) Perfluoro-1-pentanesulfonate (L-PFPeS)	10.17
7	Perfluoroheptanoic acid (PFHpA)	11.89
8	Perfluorohexanesulfonic acid (branched) (br-PFHxS)	11.96
9	Perfluorohexanesulfonic acid (branched) (br-PFHxS)	12.46
10	(Na) 1H,1H,2H,2H-Perfluorooctane sulfonate (6:2FTS)	13.89
11	Perfluorooctanoic acid (PFOA)	14.19
12	(Na) Perfluoro-1-heptanesulfonate (L-PFHpS)	14.63
13	Heptadecafluorooctanesulfonic acid (branched)	15.97
14	Perfluorononanoic acid (PFNA)	16.21
15	Heptadecafluorooctanesulfonic acid (branched)	16.49
16	(Na) 1H,1H,2H,2H-Perfluorodecane sulfonate (8:2FTS)	17.55
17	Perfluorodecanoic acid (PFDA)	17.65
18	(Na) Perfluoro-1-nonanesulfonate (L-PFNS)	17.79
19	N-Methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	18.17
20	Perfluoro-1-octanesulfonamide (FOSA-1)	18.43
21	N-Ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	18.64
22	Perfluoroundecanoic acid (PFUdA)	18.65
23	(Na) Perfluoro-1-decanesulfonate (L-PFDS)	18.72
24	Tricosafluorododecanoic acid (PFDoA)	19.42
25	Perfluorotridecanoic acid (PFTrDA)	20.06
26	Perfluorotetradecanoic acid (PFTeDA)	20.60

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

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



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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

18-0584

CTO-4164: Analysis of Solids

SB, SS

SOP Numbers (see workplan for modifications)

ExtractionSOP No. 5-370

This Batch Contains The Following Samples:			
CR892PB-FS	J8356-FS	J8364-FS	J8375-FS
CR893LCS-FS	J8357-FS	J8365-FS	J8376-FS
J8352-FS	J8360-FS	J8366MS-FS	J8377-FS
J8353-FS	J8361-FS	J8367MSD-FS	J8378-FS
J8354-FS	J8362-FS	J8373-FS	J8379-FS
J8355-FS	J8363-FS	J8374-FS	J8380-FS

Laboratory Preparation Records
COMPLETE AND VALIDATED

Prep Task Leader: Stephanie Schultz

Approved By:	Date	Initials
Denise Schumitz	10/09/2018	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

18-0584

CTO-4164: Analysis of Solids

SB, SS

Sample ID	Description
CR892PB-FS	Procedural Blank - Ottawa Sand (180507-02)
CR893LCS-FS	Laboratory Control Sample - Ottawa Sand (180507-02)
J8352-FS	VC-PM323-SS01-000H
J8353-FS	VC-PM323-SB01-0102
J8354-FS	VC-PM323-SB01-0506
J8355-FS	VC-PM323-SS03-000H
J8356-FS	VC-PM323-SB03-0102
J8357-FS	VC-PM323-SB03-0506
J8360-FS	VC-PM324-SS01-000H
J8361-FS	VC-PM324-SB01-0102
J8362-FS	VC-PM324-SB01-0506
J8363-FS	VC-PM324-SS03-000H
J8364-FS	VC-PM324-SB03-0102
J8365-FS	VC-PM324-SB03-0506
J8366MS-FS	Matrix Spike of VC-PM324-SB03-0102-MS
J8367MSD-FS	Matrix Spike Duplicate of VC-PM324-SB03-0102-MSD
J8373-FS	VC-PM64B-SS01-000H
J8374-FS	VC-PM64B-SB01-0102
J8375-FS	VC-PM64B-SB01-0506
J8376-FS	VC-PM64B-SS02-000H
J8377-FS	VC-PM64B-SB02-0102

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

18-0584

CTO-4164: Analysis of Solids

SB, SS

Sample ID	Description
J8378-FS	VC-PM64B-SB02-0506
J8379-FS	VC-PM64B-SS03-000H
J8380-FS	VC-PM64B-SB03-0102

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

18-0584

CTO-4164: Analysis of Solids

SB, SS

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

Accepted On/By:	09/28/2018 KB	**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	J8352	1	--	Intact	NA
2	J8353	1	--	Intact	NA
3	J8354	1	--	Intact	NA
4	J8355	1	--	Intact	NA
5	J8356	1	--	Intact	NA
6	J8357	1	--	Intact	NA
7	J8360	1	--	Intact	NA
8	J8361	1	--	Intact	NA
9	J8362	1	--	Intact	NA
10	J8363	1	--	Intact	NA
11	J8364	1	--	Intact	NA
12	J8365	1	--	Intact	NA
13	J8373	1	--	Intact	NA
14	J8374	1	--	Intact	NA
15	J8375	1	--	Intact	NA
16	J8376	1	--	Intact	NA
17	J8377	1	--	Intact	NA
18	J8378	1	--	Intact	NA
19	J8379	1	--	Intact	NA
20	J8380	1	--	Intact	NA

Total Samples 20 * "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

18-0584

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)
CR892PB-FS	NA	--	NA	NA	NA	2.05	100.00	0.00	2.05
CR893LCS-FS	NA	--	NA	NA	NA	2.04	100.00	0.00	2.04
J8352-FS	1	--	1.08	5.47	5.23	2.06	94.53	5.47	1.95
J8353-FS	1	--	1.09	6.15	5.78	2.07	92.69	7.31	1.92
J8354-FS	1	--	1.12	5.88	5.55	1.96	93.07	6.93	1.82
J8355-FS	1	--	1.09	6.10	5.86	2.04	95.21	4.79	1.94
J8356-FS	1	--	1.05	6.12	5.89	2.06	95.46	4.54	1.97
J8357-FS	1	--	1.05	5.92	5.58	2.04	93.02	6.98	1.90
J8360-FS	1	--	1.10	6.17	5.75	2.08	91.72	8.28	1.91
J8361-FS	1	--	1.06	6.08	5.78	1.94	94.02	5.98	1.82
J8362-FS	1	--	1.07	5.94	5.56	2.03	92.20	7.80	1.87
J8363-FS	1	--	1.07	5.33	5.26	2.03	98.36	1.64	2.00
J8364-FS	1	--	1.11	5.69	5.54	1.96	96.72	3.28	1.90
J8365-FS	1	--	1.11	5.70	4.72	2.01	78.65	21.35	1.58
J8366MS-FS	1	--	1.11	5.79	5.64	1.93	96.79	3.21	1.87
J8367MSD-FS	1	--	1.12	5.83	5.68	1.93	96.82	3.18	1.87
J8373-FS	1	--	1.08	5.60	5.52	2.03	98.23	1.77	1.99
J8374-FS	1	--	1.08	6.00	5.79	2.06	95.73	4.27	1.97
J8375-FS	1	--	1.06	5.79	4.80	2.01	79.07	20.93	1.59
J8376-FS	1	--	1.09	5.21	4.86	2.01	91.50	8.50	1.84
J8377-FS	1	--	1.10	5.34	4.68	1.93	84.43	15.57	1.63
J8378-FS	1	--	1.04	5.19	4.37	1.98	80.24	19.76	1.59
J8379-FS	1	--	1.14	5.33	5.23	2.02	97.61	2.39	1.97

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

18-0584

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)
J8380-FS	1	--	1.13	5.08	4.92	2.03	95.95	4.05	1.95

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

18-0584

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:
CR892PB-FS	10/02/2018 KB	BAL-015
CR893LCS-FS	10/02/2018 KB	BAL-015
J8352-FS	09/28/2018 KB	BAL-015
J8353-FS	09/28/2018 KB	BAL-015
J8354-FS	09/28/2018 KB	BAL-015
J8355-FS	09/28/2018 KB	BAL-015
J8356-FS	09/28/2018 KB	BAL-015
J8357-FS	09/28/2018 KB	BAL-015
J8360-FS	09/28/2018 KB	BAL-015
J8361-FS	09/28/2018 KB	BAL-015
J8362-FS	09/28/2018 KB	BAL-015
J8363-FS	09/28/2018 KB	BAL-015
J8364-FS	09/28/2018 KB	BAL-015
J8365-FS	09/28/2018 KB	BAL-015
J8366MS-FS	09/28/2018 KB	BAL-015
J8367MSD-FS	09/28/2018 KB	BAL-015
J8373-FS	09/28/2018 KB	BAL-015
J8374-FS	09/28/2018 KB	BAL-015
J8375-FS	09/28/2018 KB	BAL-015
J8376-FS	09/28/2018 KB	BAL-015
J8377-FS	09/28/2018 KB	BAL-015
J8378-FS	09/28/2018 KB	BAL-015
J8379-FS	09/28/2018 KB	BAL-015
J8380-FS	09/28/2018 KB	BAL-015

Percent Dry Wt (%) = [(Sample Dry Wt. (g) - Tare Wt. (g))/(Aliquot Wet Wt. (g) - Tare Wt. (g))] * 100
Sample Dry Wt. (%) = [(Sample Wet Wt. (g) * (Percent Dry Wt./100)]
* "C" = Sample Container Is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
ELECTRONIC DRY WEIGHT DETERMINATION

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

Project No.(s)
100110125-01

18-0584

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:
CR892PB-FS	--	--
CR893LCS-FS	--	--
J8352-FS	09/28/2018 KB	BAL-015
J8353-FS	09/28/2018 KB	BAL-015
J8354-FS	09/28/2018 KB	BAL-015
J8355-FS	09/28/2018 KB	BAL-015
J8356-FS	09/28/2018 KB	BAL-015
J8357-FS	09/28/2018 KB	BAL-015
J8360-FS	09/28/2018 KB	BAL-015
J8361-FS	09/28/2018 KB	BAL-015
J8362-FS	09/28/2018 KB	BAL-015
J8363-FS	09/28/2018 KB	BAL-015
J8364-FS	09/28/2018 KB	BAL-015
J8365-FS	09/28/2018 KB	BAL-015
J8366MS-FS	09/28/2018 KB	BAL-015
J8367MSD-FS	09/28/2018 KB	BAL-015
J8373-FS	09/28/2018 KB	BAL-015
J8374-FS	09/28/2018 KB	BAL-015
J8375-FS	09/28/2018 KB	BAL-015
J8376-FS	09/28/2018 KB	BAL-015
J8377-FS	09/28/2018 KB	BAL-015
J8378-FS	09/28/2018 KB	BAL-015
J8379-FS	09/28/2018 KB	BAL-015
J8380-FS	09/28/2018 KB	BAL-015

Percent Dry Wt (%) = [(Sample Dry Wt. (g) - Tare Wt. (g))/(Aliquot Wet Wt. (g) - Tare Wt. (g))] * 100
Sample Dry Wt. (%) = [(Sample Wet Wt. (g) * (Percent Dry Wt./100)]
* "C" = Sample Container Is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
ELECTRONIC DRY WEIGHT DETERMINATION

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

Project No.(s)
100110125-01

18-0584

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:
CR892PB-FS	--	--
CR893LCS-FS	--	--
J8352-FS	09/28/2018 KB	BAL-015
J8353-FS	09/28/2018 KB	BAL-015
J8354-FS	09/28/2018 KB	BAL-015
J8355-FS	09/28/2018 KB	BAL-015
J8356-FS	09/28/2018 KB	BAL-015
J8357-FS	09/28/2018 KB	BAL-015
J8360-FS	09/28/2018 KB	BAL-015
J8361-FS	09/28/2018 KB	BAL-015
J8362-FS	09/28/2018 KB	BAL-015
J8363-FS	09/28/2018 KB	BAL-015
J8364-FS	09/28/2018 KB	BAL-015
J8365-FS	09/28/2018 KB	BAL-015
J8366MS-FS	09/28/2018 KB	BAL-015
J8367MSD-FS	09/28/2018 KB	BAL-015
J8373-FS	09/28/2018 KB	BAL-015
J8374-FS	09/28/2018 KB	BAL-015
J8375-FS	09/28/2018 KB	BAL-015
J8376-FS	09/28/2018 KB	BAL-015
J8377-FS	09/28/2018 KB	BAL-015
J8378-FS	09/28/2018 KB	BAL-015
J8379-FS	09/28/2018 KB	BAL-015
J8380-FS	09/28/2018 KB	BAL-015

Percent Dry Wt (%) = [(Sample Dry Wt. (g) - Tare Wt. (g))/(Aliquot Wet Wt. (g) - Tare Wt. (g))] * 100
Sample Dry Wt. (%) = [(Sample Wet Wt. (g) * (Percent Dry Wt./100)]
* "C" = Sample Container Is Consumed

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
ELECTRONIC DRY WEIGHT DETERMINATION

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

Project No.(s)
100110125-01

18-0584

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:
CR892PB-FS	--	--
CR893LCS-FS	--	--
J8352-FS	10/01/2018 KB	BAL-015
J8353-FS	10/01/2018 KB	BAL-015
J8354-FS	10/01/2018 KB	BAL-015
J8355-FS	10/01/2018 KB	BAL-015
J8356-FS	10/01/2018 KB	BAL-015
J8357-FS	10/01/2018 KB	BAL-015
J8360-FS	10/01/2018 KB	BAL-015
J8361-FS	10/01/2018 KB	BAL-015
J8362-FS	10/01/2018 KB	BAL-015
J8363-FS	10/01/2018 KB	BAL-015
J8364-FS	10/01/2018 KB	BAL-015
J8365-FS	10/01/2018 KB	BAL-015
J8366MS-FS	10/01/2018 KB	BAL-015
J8367MSD-FS	10/01/2018 KB	BAL-015
J8373-FS	10/01/2018 KB	BAL-015
J8374-FS	10/01/2018 KB	BAL-015
J8375-FS	10/01/2018 KB	BAL-015
J8376-FS	10/01/2018 KB	BAL-015
J8377-FS	10/01/2018 KB	BAL-015
J8378-FS	10/01/2018 KB	BAL-015
J8379-FS	10/01/2018 KB	BAL-015
J8380-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

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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

18-0584

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
CR892PB-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
CR893LCS-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
CR893LCS-FS	KB83	LCS/MS	1	400	10/02/18 SAS	KB	NA
J8352-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8353-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8354-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8355-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8356-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8357-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8360-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8361-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8362-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8363-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8364-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8365-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8366MS-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8366MS-FS	KB83	LCS/MS	1	800	10/02/18 SAS	KB	NA
J8367MSD-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8367MSD-FS	KB83	LCS/MS	1	800	10/02/18 SAS	KB	NA
J8373-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8374-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8375-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8376-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8377-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8378-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA
J8379-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

18-0584

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
J8380-FS	JY27	SIS	1	50	10/02/18 SAS	KB	NA

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
JY27	Pipette	B814659662
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

18-0584

CTO-4164: Analysis of Solids

SB, SS

Sample ID	1st Extraction	2nd Extraction	3rd Extraction	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comment
CR892PB-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
CR893LCS-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8352-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8353-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8354-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8355-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8356-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8357-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8360-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8361-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8362-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8363-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8364-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8365-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8366MS-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8367MSD-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8373-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8374-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8375-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8376-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8377-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8378-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8379-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA
J8380-FS	10/02/18 SAS	10/02/18 KB	NA	NA	NA	NA	NA	NA

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BATTELLE - NORWELL OPERATIONS
SAMPLE EXTRACTION FORM

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

Project No.(s)
100110125-01

18-0584

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

18-0584

CTO-4164: Analysis of Solids

SB, SS

Extract Id	Date	Init.	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comments
CR892PB-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
CR893LCS-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8352-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8353-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8354-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8355-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8356-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8357-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8360-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8361-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8362-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8363-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8364-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8365-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8366MS-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8367MSD-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8373-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8374-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8375-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8376-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

18-0584

CTO-4164: Analysis of Solids

SB, SS

Extract Id	Date	Init.	Conc. ID	Turbo °C	Turbo PSI	KD °C	Comments
J8377-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8378-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8379-FS(3)	10/04/18	KB	NA	NA	NA	NA	NA
J8380-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

18-0584

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
CR892PB-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
CR893LCS-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8352-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8352-FS-D(5)	955	45	KB34	50	1	1000	100.000	10/05/18 JRT	SG
J8353-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8353-FS-D(5)	955	45	KB34	50	1	1000	100.000	10/05/18 JRT	SG
J8354-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8354-FS-D(5)	955	45	KB34	50	1	1000	100.000	10/05/18 JRT	SG
J8355-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8356-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8357-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8360-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8361-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8362-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8363-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8364-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8364-FS-D(5)	960	40	KB34	50	1	1000	50.000	10/05/18 JRT	SG
J8365-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8366MS-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG

* - 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

18-0584

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
J8366MS-FS-D(5)	960	40	KB34	50	1	1000	50.000	10/05/18 JRT	SG
J8367MSD-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8367MSD-FS-D(5)	960	40	KB34	50	1	1000	50.000	10/05/18 JRT	SG
J8373-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8374-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8375-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8376-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8377-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8378-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8379-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG
J8380-FS(3)	950	50	KB34	50	1	1000	10.000	10/05/18 SAS	SG

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KB34	Pipette	B814659662
KB72	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

18-0584

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
J8352-FS-D(5)	100	KB72	SIS	1	45	0	0	10/05/18 JRT	SG
J8353-FS-D(5)	100	KB72	SIS	1	45	0	0	10/05/18 JRT	SG
J8354-FS-D(5)	100	KB72	SIS	1	45	0	0	10/05/18 JRT	SG
J8364-FS-D(5)	50	KB72	SIS	1	40	0	0	10/05/18 JRT	SG
J8366MS-FS-D(5)	50	KB72	SIS	1	40	0	0	10/05/18 JRT	SG
J8367MSD-FS-D(5)	50	KB72	SIS	1	40	0	0	10/05/18 JRT	SG

Syringes/Pipettes Used:

Std ID	Type	Syr/Pip
KB34	Pipette	B814659662
KB72	Pipette	B814659662

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

18-0584

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	#					
CR892PB-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
CR892PB-FS	2	--	10/4/2018 6:16:00 PM	CR892PB-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
CR892PB-FS	3	--	10/4/2018 6:16:00 PM	CR892PB-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
CR893LCS-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
CR893LCS-FS	2	--	10/4/2018 6:16:00 PM	CR893LCS-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
CR893LCS-FS	3	--	10/4/2018 6:16:00 PM	CR893LCS-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8352-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8352-FS	2	--	10/4/2018 6:16:00 PM	J8352-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8352-FS	3	C	10/4/2018 6:16:00 PM	J8352-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8352-FS	4	--	10/5/2018 4:57:00 PM	J8352-FS	3	1000	900	1.111	11.111	10/05/18 JRT
J8352-FS-D	5	--	10/5/2018 4:57:00 PM	J8352-FS	3	1000	100	10.000	100.000	10/05/18 JRT
J8353-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8353-FS	2	--	10/4/2018 6:16:00 PM	J8353-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8353-FS	3	C	10/4/2018 6:16:00 PM	J8353-FS	0	10000	1000	10.000	10.000	10/04/18 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

18-0584

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	#					
J8353-FS	4	--	10/5/2018 4:57:00 PM	J8353-FS	3	1000	900	1.111	11.111	10/05/18 JRT
J8353-FS-D	5	--	10/5/2018 4:57:00 PM	J8353-FS	3	1000	100	10.000	100.000	10/05/18 JRT
J8354-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8354-FS	2	--	10/4/2018 6:16:00 PM	J8354-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8354-FS	3	C	10/4/2018 6:16:00 PM	J8354-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8354-FS	4	--	10/5/2018 4:57:00 PM	J8354-FS	3	1000	900	1.111	11.111	10/05/18 JRT
J8354-FS-D	5	--	10/5/2018 4:57:00 PM	J8354-FS	3	1000	100	10.000	100.000	10/05/18 JRT
J8355-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8355-FS	2	--	10/4/2018 6:16:00 PM	J8355-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8355-FS	3	--	10/4/2018 6:16:00 PM	J8355-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8356-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8356-FS	2	--	10/4/2018 6:16:00 PM	J8356-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8356-FS	3	--	10/4/2018 6:16:00 PM	J8356-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8357-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

18-0584

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	#					
J8357-FS	2	--	10/4/2018 6:16:00 PM	J8357-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8357-FS	3	--	10/4/2018 6:16:00 PM	J8357-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8360-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8360-FS	2	--	10/4/2018 6:16:00 PM	J8360-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8360-FS	3	--	10/4/2018 6:16:00 PM	J8360-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8361-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8361-FS	2	--	10/4/2018 6:16:00 PM	J8361-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8361-FS	3	--	10/4/2018 6:16:00 PM	J8361-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8362-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8362-FS	2	--	10/4/2018 6:16:00 PM	J8362-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8362-FS	3	--	10/4/2018 6:16:00 PM	J8362-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8363-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8363-FS	2	--	10/4/2018 6:16:00 PM	J8363-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8363-FS	3	--	10/4/2018 6:16:00 PM	J8363-FS	0	10000	1000	10.000	10.000	10/04/18 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

18-0584

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	#					
J8364-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8364-FS	2	--	10/4/2018 6:16:00 PM	J8364-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8364-FS	3	C	10/4/2018 6:16:00 PM	J8364-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8364-FS	4	--	10/5/2018 4:58:00 PM	J8364-FS	3	1000	800	1.250	12.500	10/05/18 JRT
J8364-FS-D	5	--	10/5/2018 4:58:00 PM	J8364-FS	3	1000	200	5.000	50.000	10/05/18 JRT
J8365-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8365-FS	2	--	10/4/2018 6:16:00 PM	J8365-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8365-FS	3	--	10/4/2018 6:16:00 PM	J8365-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8366MS-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8366MS-FS	2	--	10/4/2018 6:16:00 PM	J8366MS-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8366MS-FS	3	C	10/4/2018 6:16:00 PM	J8366MS-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8366MS-FS	4	--	10/5/2018 4:58:00 PM	J8366MS-FS	3	1000	800	1.250	12.500	10/05/18 JRT
J8366MS-FS-D	5	--	10/5/2018 4:58:00 PM	J8366MS-FS	3	1000	200	5.000	50.000	10/05/18 JRT
J8367MSD-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

18-0584

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	#					
J8367MSD-FS	2	--	10/4/2018 6:16:00 PM	J8367MSD-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8367MSD-FS	3	C	10/4/2018 6:16:00 PM	J8367MSD-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8367MSD-FS	4	--	10/5/2018 4:58:00 PM	J8367MSD-FS	3	1000	800	1.250	12.500	10/05/18 JRT
J8367MSD-FS-D	5	--	10/5/2018 4:58:00 PM	J8367MSD-FS	3	1000	200	5.000	50.000	10/05/18 JRT
J8373-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8373-FS	2	--	10/4/2018 6:16:00 PM	J8373-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8373-FS	3	--	10/4/2018 6:16:00 PM	J8373-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8374-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8374-FS	2	--	10/4/2018 6:16:00 PM	J8374-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8374-FS	3	--	10/4/2018 6:16:00 PM	J8374-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8375-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8375-FS	2	--	10/4/2018 6:16:00 PM	J8375-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8375-FS	3	--	10/4/2018 6:16:00 PM	J8375-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8376-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

18-0584

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	#					
J8376-FS	2	--	10/4/2018 6:16:00 PM	J8376-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8376-FS	3	--	10/4/2018 6:16:00 PM	J8376-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8377-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8377-FS	2	--	10/4/2018 6:16:00 PM	J8377-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8377-FS	3	--	10/4/2018 6:16:00 PM	J8377-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8378-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8378-FS	2	--	10/4/2018 6:16:00 PM	J8378-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8378-FS	3	--	10/4/2018 6:16:00 PM	J8378-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8379-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8379-FS	2	--	10/4/2018 6:16:00 PM	J8379-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8379-FS	3	--	10/4/2018 6:16:00 PM	J8379-FS	0	10000	1000	10.000	10.000	10/04/18 SAS
J8380-FS	0	C	10/2/2018 4:17:00 PM	NA		NA	NA	1.000	1.000	10/02/18 SAS
J8380-FS	2	--	10/4/2018 6:16:00 PM	J8380-FS	0	10000	9000	1.111	1.111	10/04/18 SAS
J8380-FS	3	--	10/4/2018 6:16:00 PM	J8380-FS	0	10000	1000	10.000	10.000	10/04/18 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

18-0584

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	#					

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
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

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

Project No.(s)
100110125-01

18-0584

CTO-4164: Analysis of Solids

SB, SS

Purpose:	LC-MS/MS TRANSFER	**Last Activity:**	Prep->Inst
Relinquished On/By:	Oct 5 2018 6:09PM JRT	**Received On/By:**	Oct 5 2018 6:20PM 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	CR892PB-FS(3)	1000	10	Intact	NA
2	CR893LCS-FS(3)	1000	10	Intact	NA
3	J8352-FS(3)	1000	10	Intact	NA
4	J8352-FS-D(5)	1000	100	Intact	NA
5	J8353-FS(3)	1000	10	Intact	NA
6	J8353-FS-D(5)	1000	100	Intact	NA
7	J8354-FS(3)	1000	10	Intact	NA
8	J8354-FS-D(5)	1000	100	Intact	NA
9	J8355-FS(3)	1000	10	Intact	NA
10	J8356-FS(3)	1000	10	Intact	NA
11	J8357-FS(3)	1000	10	Intact	NA
12	J8360-FS(3)	1000	10	Intact	NA
13	J8361-FS(3)	1000	10	Intact	NA
14	J8362-FS(3)	1000	10	Intact	NA
15	J8363-FS(3)	1000	10	Intact	NA
16	J8364-FS(3)	1000	10	Intact	NA
17	J8364-FS-D(5)	1000	50	Intact	NA
18	J8365-FS(3)	1000	10	Intact	NA
19	J8366MS-FS(3)	1000	10	Intact	NA
20	J8366MS-FS-D(5)	1000	50	Intact	NA
21	J8367MSD-FS(3)	1000	10	Intact	NA
22	J8367MSD-FS-D(5)	1000	50	Intact	NA
23	J8373-FS(3)	1000	10	Intact	NA
24	J8374-FS(3)	1000	10	Intact	NA
25	J8375-FS(3)	1000	10	Intact	NA
26	J8376-FS(3)	1000	10	Intact	NA
27	J8377-FS(3)	1000	10	Intact	NA
28	J8378-FS(3)	1000	10	Intact	NA

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BATTELLE - NORWELL OPERATIONS
EXTRACT - INSTRUMENT FACILITY CUSTODY PAGE

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

Project No.(s)
100110125-01

18-0584

CTO-4164: Analysis of Solids

SB, SS

29	J8379-FS(3)	1000	10	Intact	NA
30	J8380-FS(3)	1000	10	Intact	NA
Total Extracts:	30				

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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

18-0584

CTO-4164: Analysis of Solids

SB, SS

Sample ID:	Comment:	Date/Initials:
CR892PB-FS	NA	NA
CR893LCS-FS	NA	NA
J8352-FS	NA	NA
J8353-FS	NA	NA
J8354-FS	NA	NA
J8355-FS	NA	NA
J8356-FS	NA	NA
J8357-FS	NA	NA
J8360-FS	NA	NA
J8361-FS	NA	NA
J8362-FS	NA	NA
J8363-FS	NA	NA
J8364-FS	NA	NA
J8365-FS	NA	NA
J8366MS-FS	NA	NA
J8367MSD-FS	NA	NA
J8373-FS	NA	NA
J8374-FS	NA	NA
J8375-FS	NA	NA
J8376-FS	NA	NA
J8377-FS	NA	NA
J8378-FS	NA	NA
J8379-FS	NA	NA
J8380-FS	NA	NA

BATTELLE
It can be done

BATTELLE - NORWELL OPERATIONS
MISCELLANEOUS DOCUMENTATION FORM

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

18-0584

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:**	10/08/2018
PM Approval:	Jonathan Thorn	**On:**	10/09/2018

Analytical Calibrations

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 11/10/2018 10:53:58 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
1	MeOH		10/8/2018 3:29:19 PM	5-0369.dam	18-0601.wiff
2	KB73	L1	10/8/2018 3:40:10 PM	5-0369.dam	18-0601.wiff
3	KB74	L2	10/8/2018 3:51:02 PM	5-0369.dam	18-0601.wiff
4	KB75	L3	10/8/2018 4:01:53 PM	5-0369.dam	18-0601.wiff
5	KB76	L4	10/8/2018 4:12:44 PM	5-0369.dam	18-0601.wiff
6	KB77	L5	10/8/2018 4:23:36 PM	5-0369.dam	18-0601.wiff
7	KB78	L6	10/8/2018 4:34:28 PM	5-0369.dam	18-0601.wiff
8	KB79	L7	10/8/2018 4:45:19 PM	5-0369.dam	18-0601.wiff
9	KB80 IB	Instrument Blank	10/8/2018 4:56:10 PM	5-0369.dam	18-0601.wiff
10	KB81 ICC	ICC	10/8/2018 5:07:01 PM	5-0369.dam	18-0601.wiff
11	KB89 Branch	Branch Standard	10/8/2018 5:17:54 PM	5-0369.dam	18-0601.wiff

There is no opening CCV at the beginning of this sequence because it was a continuous run and the instrument did not stop between the first and second sequences. LMG 10/15/18

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 11/10/2018 11:05:09 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
3	MeOH		10/8/2018 5:28:47 PM	5-0369.dam	18-0581_18-0584A.wiff
~~4~~	~~CR886PB-FS(3)~~	~~Procedural Blank~~	~~10/8/2018 5:39:40 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~5~~	~~CR887LCS-FS(3)~~	~~Laboratory Control Sample~~	~~10/8/2018 5:50:31 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~6~~	~~J8291-FS(3)~~	~~VC-CS94-SS01-000H~~	~~10/8/2018 6:01:23 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~7~~	~~J8292-FS(3)~~	~~VC-CS94-SB01-0102~~	~~10/8/2018 6:12:14 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~8~~	~~J8293-FS(3)~~	~~VC-CS94-SB01-0506~~	~~10/8/2018 6:23:08 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~9~~	~~J8294-FS(3)~~	~~VC-CS94-SS02-000H~~	~~10/8/2018 6:33:58 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~10~~	~~J8295-FS(3)~~	~~VC-CS94-SB02-0102~~	~~10/8/2018 6:44:49 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~11~~	~~J8296-FS(3)~~	~~VC-CS94-SB02-0506~~	~~10/8/2018 6:55:42 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~12~~	~~J8297-FS(3)~~	~~VC-CS94-SS03-000H~~	~~10/8/2018 7:06:32 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~13~~	~~J8298-FS(3)~~	~~VC-CS94-SB03-0102~~	~~10/8/2018 7:17:24 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~14~~	~~KB76 CCV~~	~~CCV~~	~~10/8/2018 7:28:16 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~15~~	~~MeOH~~		~~10/8/2018 7:39:06 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~16~~	~~J8299-FS(3)~~	~~VC-CS94-SB03-0506~~	~~10/8/2018 7:49:59 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~17~~	~~J8300-FS(3)~~	~~VC-CS94-SS04-000H~~	~~10/8/2018 8:00:50 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~18~~	~~J8301-FS(3)~~	~~VC-CS94-SB04-0102~~	~~10/8/2018 8:11:41 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~19~~	~~J8302-FS(3)~~	~~VC-CS94-SB04-0506~~	~~10/8/2018 8:22:32 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~20~~	~~J8303-FS(3)~~	~~VC-CS94-SS05-000H~~	~~10/8/2018 8:33:25 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~21~~	~~J8304-FS(3)~~	~~VC-CS94-SB05-0102~~	~~10/8/2018 8:44:18 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~22~~	~~J8305-FS(3)~~	~~VC-CS94-SB05-0506~~	~~10/8/2018 8:55:09 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~23~~	~~J8306MS-FS(3)~~	~~VC-CS94-SS04-000H-MS~~	~~10/8/2018 9:06:01 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
~~24~~	~~J8307MSD-FS(3)~~	~~VC-CS94-SS04-000H-MSD~~	~~10/8/2018 9:16:54 PM~~	~~5-0369.dam~~	~~18-0581_18-0584A.wiff~~
25	KB77 CCV	CCV	10/8/2018 9:27:45 PM	5-0369.dam	18-0581_18-0584A.wiff
26	MeOH		10/8/2018 9:38:36 PM	5-0369.dam	18-0581_18-0584A.wiff
27	CR892PB-FS(3)	Procedural Blank	10/8/2018 9:49:26 PM	5-0369.dam	18-0581_18-0584A.wiff
28	CR893LCS-FS(3)	Laboratory Control Sample	10/8/2018 10:00:19 PM	5-0369.dam	18-0581_18-0584A.wiff
29	J8352-FS(3)	VC-PM323-SS01-	10/8/2018 10:11:10	5-0369.dam	18-0581_18-0584A.wiff

1

1 Samples from another batch and not reported with this one. DMS 10/11/2018

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 11/10/2018 11:05:09 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
		000H	PM		
30	J8352-FS-D(5)	VC-PM323-SS01-000H	10/8/2018 10:22:03 PM	5-0369.dam	18-0581_18-0584A.wiff
31	J8353-FS(3)	VC-PM323-SB01-0102	10/8/2018 10:32:55 PM	5-0369.dam	18-0581_18-0584A.wiff
32	J8353-FS-D(5)	VC-PM323-SB01-0102	10/8/2018 10:43:46 PM	5-0369.dam	18-0581_18-0584A.wiff
33	J8354-FS(3)	VC-PM323-SB01-0506	10/8/2018 10:54:37 PM	5-0369.dam	18-0581_18-0584A.wiff
34	J8354-FS-D(5)	VC-PM323-SB01-0506	10/8/2018 11:05:28 PM	5-0369.dam	18-0581_18-0584A.wiff
35	J8355-FS(3)	VC-PM323-SS03-000H	10/8/2018 11:16:20 PM	5-0369.dam	18-0581_18-0584A.wiff
36	J8356-FS(3)	VC-PM323-SB03-0102	10/8/2018 11:27:10 PM	5-0369.dam	18-0581_18-0584A.wiff
37	KB76 CCV	CCV	10/8/2018 11:38:01 PM	5-0369.dam	18-0581_18-0584A.wiff
38	MeOH		10/8/2018 11:48:53 PM	5-0369.dam	18-0581_18-0584A.wiff
39	J8357-FS(3)	VC-PM323-SB03-0506	10/8/2018 11:59:44 PM	5-0369.dam	18-0581_18-0584A.wiff
40	J8360-FS(3)	VC-PM324-SS01-000H	10/9/2018 12:10:35 AM	5-0369.dam	18-0581_18-0584A.wiff
41	J8361-FS(3)	VC-PM324-SB01-0102	10/9/2018 12:21:28 AM	5-0369.dam	18-0581_18-0584A.wiff
42	J8362-FS(3)	VC-PM324-SB01-0506	10/9/2018 12:32:20 AM	5-0369.dam	18-0581_18-0584A.wiff
43	J8363-FS(3)	VC-PM324-SS03-000H	10/9/2018 12:43:11 AM	5-0369.dam	18-0581_18-0584A.wiff
44	J8364-FS(3)	VC-PM324-SB03-0102	10/9/2018 12:54:04 AM	5-0369.dam	18-0581_18-0584A.wiff
45	J8364-FS-D(5)	VC-PM324-SB03-0102	10/9/2018 1:04:56 AM	5-0369.dam	18-0581_18-0584A.wiff
46	J8365-FS(3)	VC-PM324-SB03-0506	10/9/2018 1:15:48 AM	5-0369.dam	18-0581_18-0584A.wiff
47	J8366MS-FS(3)	VC-PM324-SB03-0102-MS	10/9/2018 1:26:41 AM	5-0369.dam	18-0581_18-0584A.wiff
48	J8366MS-FS-D(5)	VC-PM324-SB03-0102-MS	10/9/2018 1:37:33 AM	5-0369.dam	18-0581_18-0584A.wiff
49	KB77 CCV	CCV	10/9/2018 1:48:24 AM	5-0369.dam	18-0581_18-0584A.wiff
50	MeOH		10/9/2018 1:59:16 AM	5-0369.dam	18-0581_18-0584A.wiff
51	J8367MSD-FS(3)	VC-PM324-SB03-0102-MSD	10/9/2018 2:10:07 AM	5-0369.dam	18-0581_18-0584A.wiff
52	J8367MSD-FS-D(5)	VC-PM324-SB03-0102-MSD	10/9/2018 2:20:59 AM	5-0369.dam	18-0581_18-0584A.wiff
53	J8373-FS(3)	VC-PM64B-SS01-000H	10/9/2018 2:31:50 AM	5-0369.dam	18-0581_18-0584A.wiff
54	J8374-FS(3)	VC-PM64B-SB01-0102	10/9/2018 2:42:42 AM	5-0369.dam	18-0581_18-0584A.wiff
1	J8375-FS(3)	VC-PM64B-SB01-0506	10/9/2018 2:53:33 AM	5-0369.dam	18-0581_18-0584A.wiff

BATTELLE

Sequence Report

Created with Analyst Reporter
Printed: 11/10/2018 11:05:09 AM

Vial	Laboratory Sample ID	Client Sample ID	Acquisition Date	Acquisition Method	Data File
2	J8376-FS(3)	VC-PM64B-SS02-000H	10/9/2018 3:04:26 AM	5-0369.dam	18-0581_18-0584A.wiff
3	J8377-FS(3)	VC-PM64B-SB02-0102	10/9/2018 3:15:19 AM	5-0369.dam	18-0581_18-0584A.wiff
4	J8378-FS(3)	VC-PM64B-SB02-0506	10/9/2018 3:26:11 AM	5-0369.dam	18-0581_18-0584A.wiff
5	J8379-FS(3)	VC-PM64B-SS03-000H	10/9/2018 3:37:04 AM	5-0369.dam	18-0581_18-0584A.wiff
6	J8380-FS(3)	VC-PM64B-SB03-0102	10/9/2018 3:47:58 AM	5-0369.dam	18-0581_18-0584A.wiff
7	KB76 CCV	CCV	10/9/2018 3:58:51 AM	5-0369.dam	18-0581_18-0584A.wiff

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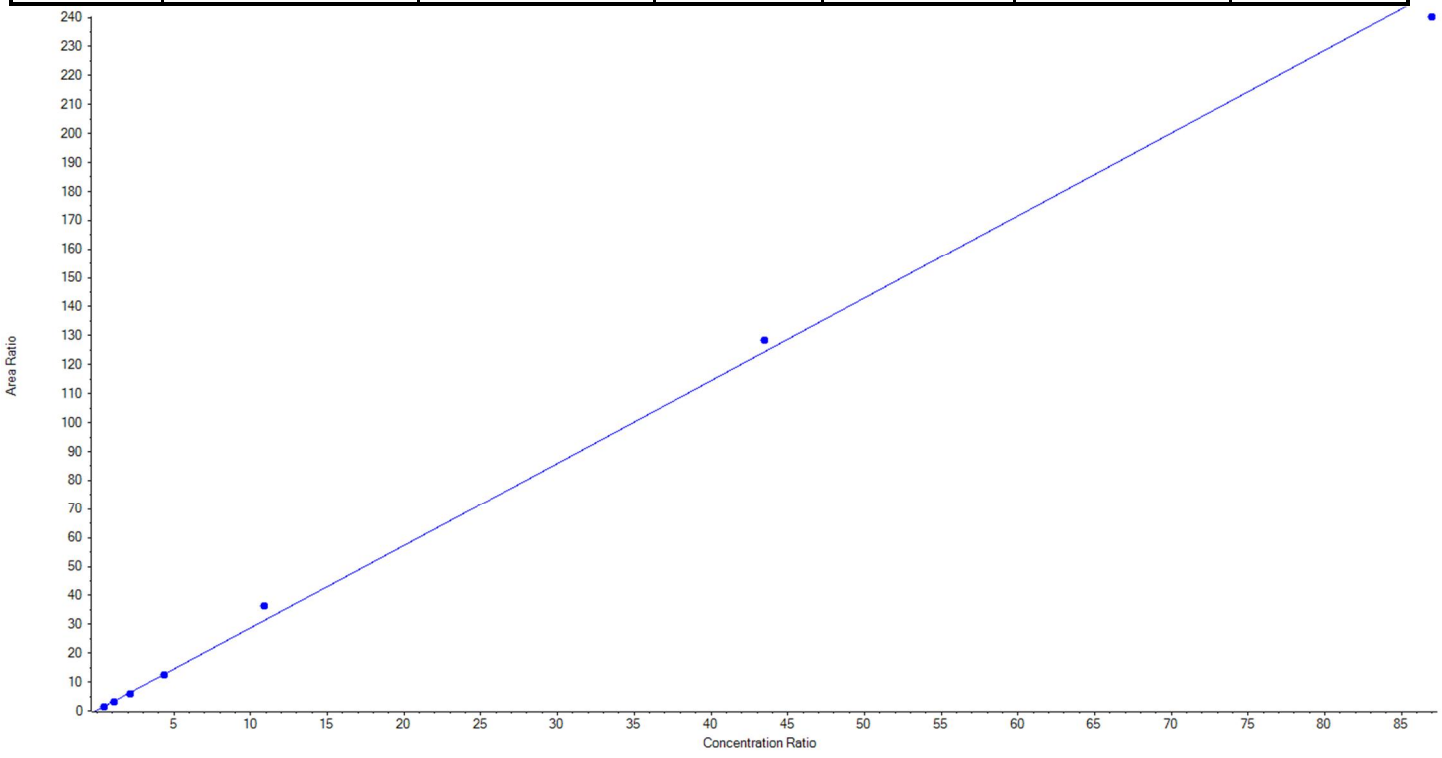
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Analyte Name	PFBS_1	**Data File**	18-0601.wiff
MRM Transition	298.9 / 80.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 2.85612 x + 0.20125 (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	101.00	99.953426	99.0
3	KB74	L2	True	252.50	235.867817	93.4
4	KB75	L3	True	505.00	467.701721	92.6
5	KB76	L4	True	1010.00	993.462503	98.4
6	KB77	L5	True	2525.00	2947.537177	116.7
7	KB78	L6	True	10100.00	10433.295836	103.3
8	KB79	L7	True	20200.00	19515.681521	96.6



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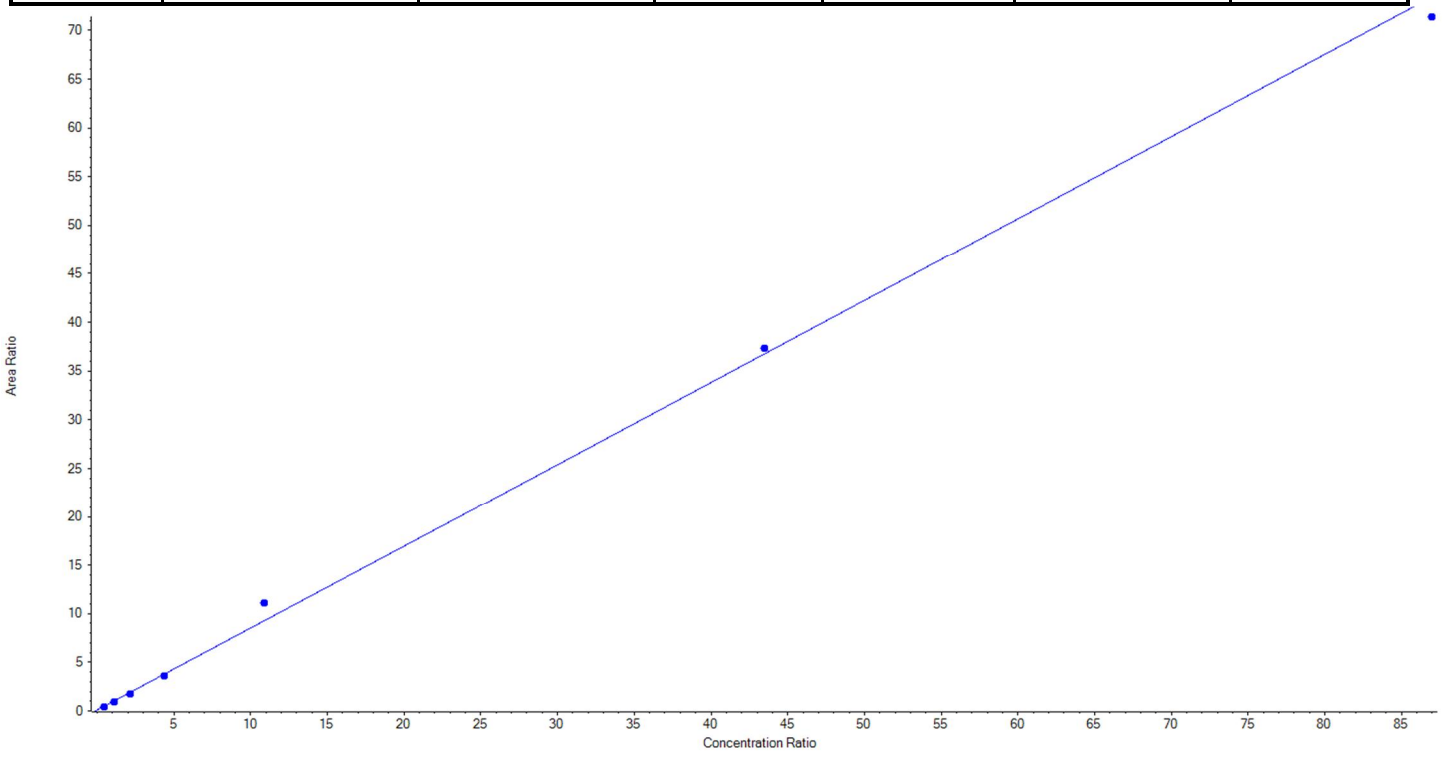
Calibration Summary Report

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Analyte Name	PFBS_2	**Data File**	18-0601.wiff
MRM Transition	298.9 / 99.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C3-PFBS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.84300 x + 0.09895 (r = 0.99812) (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	99.537833	98.6
3	KB74	L2	True	252.50	237.336670	94.0
4	KB75	L3	True	505.00	467.679320	92.6
5	KB76	L4	True	1010.00	974.004845	96.4
6	KB77	L5	True	2525.00	3021.038298	119.7
7	KB78	L6	True	10100.00	10256.020604	101.5
8	KB79	L7	True	20200.00	19637.882430	97.2



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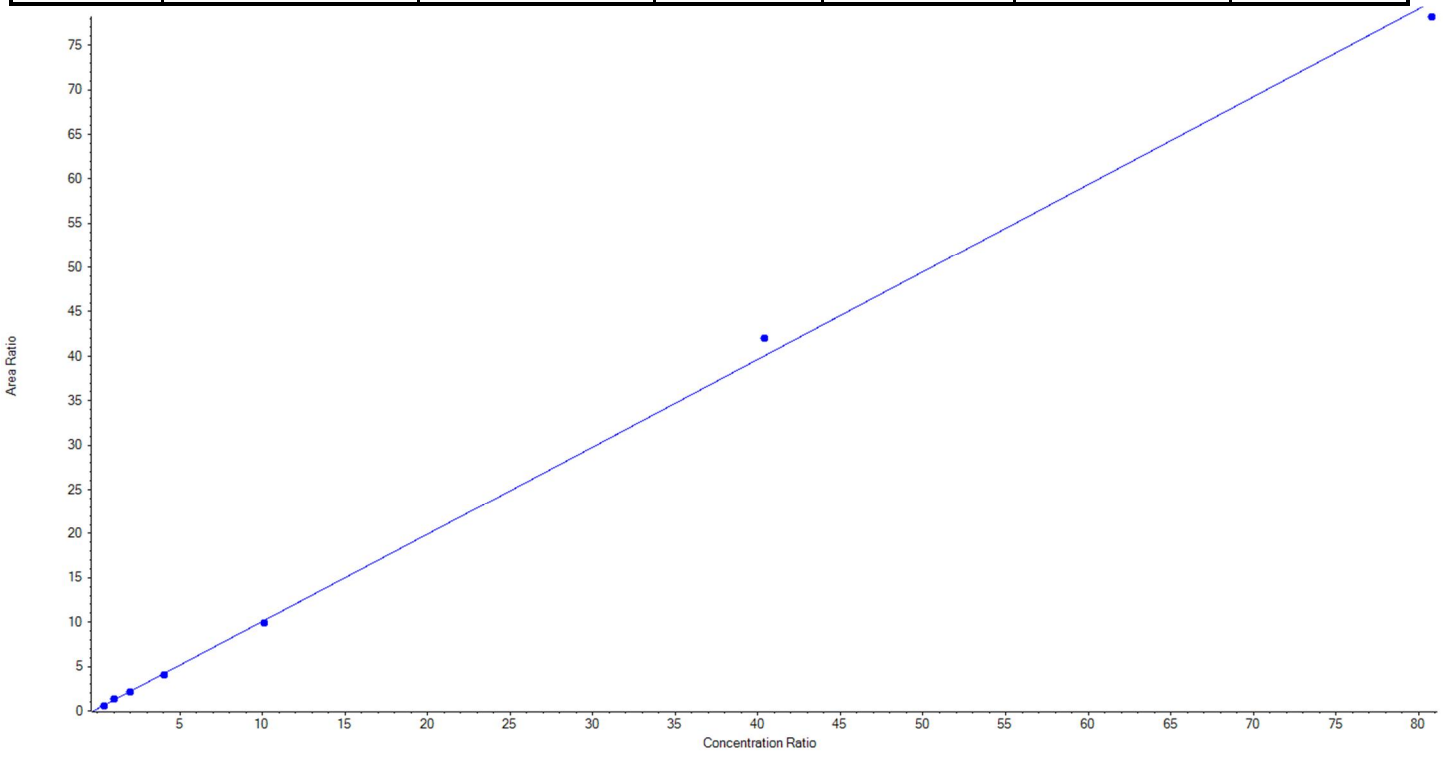
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Analyte Name	PFHxA_1	**Data File**	18-0601.wiff
MRM Transition	313.0 / 269.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.98554 x + 0.22259 (r = 0.99933) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	101.00	92.447260	91.5
3	KB74	L2	True	252.50	287.493278	113.9
4	KB75	L3	True	505.00	488.979798	96.8
5	KB76	L4	True	1010.00	983.021914	97.3
6	KB77	L5	True	2525.00	2463.536173	97.6
7	KB78	L6	True	10100.00	10605.144570	105.0
8	KB79	L7	True	20200.00	19772.877006	97.9



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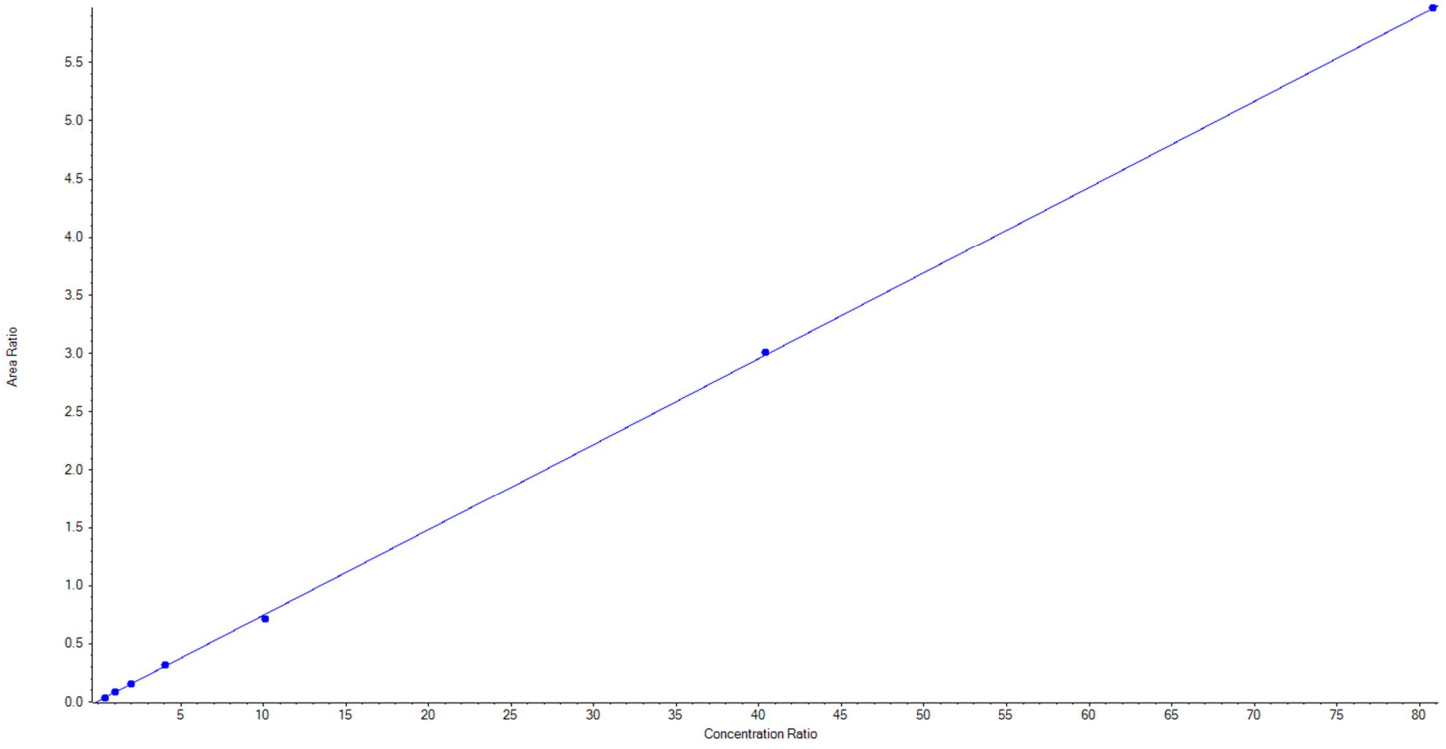
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Analyte Name	PFHxA_2	**Data File**	18-0601.wiff
MRM Transition	313.0 / 119.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C5-PFHxA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.07369 x + 0.00793 (r = 0.99983) (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	99.213282	98.2
3	KB74	L2	True	252.50	256.972963	101.8
4	KB75	L3	True	505.00	506.830897	100.4
5	KB76	L4	True	1010.00	1054.871534	104.4
6	KB77	L5	True	2525.00	2382.338955	94.4
7	KB78	L6	True	10100.00	10176.855980	100.8
8	KB79	L7	True	20200.00	20216.416389	100.1



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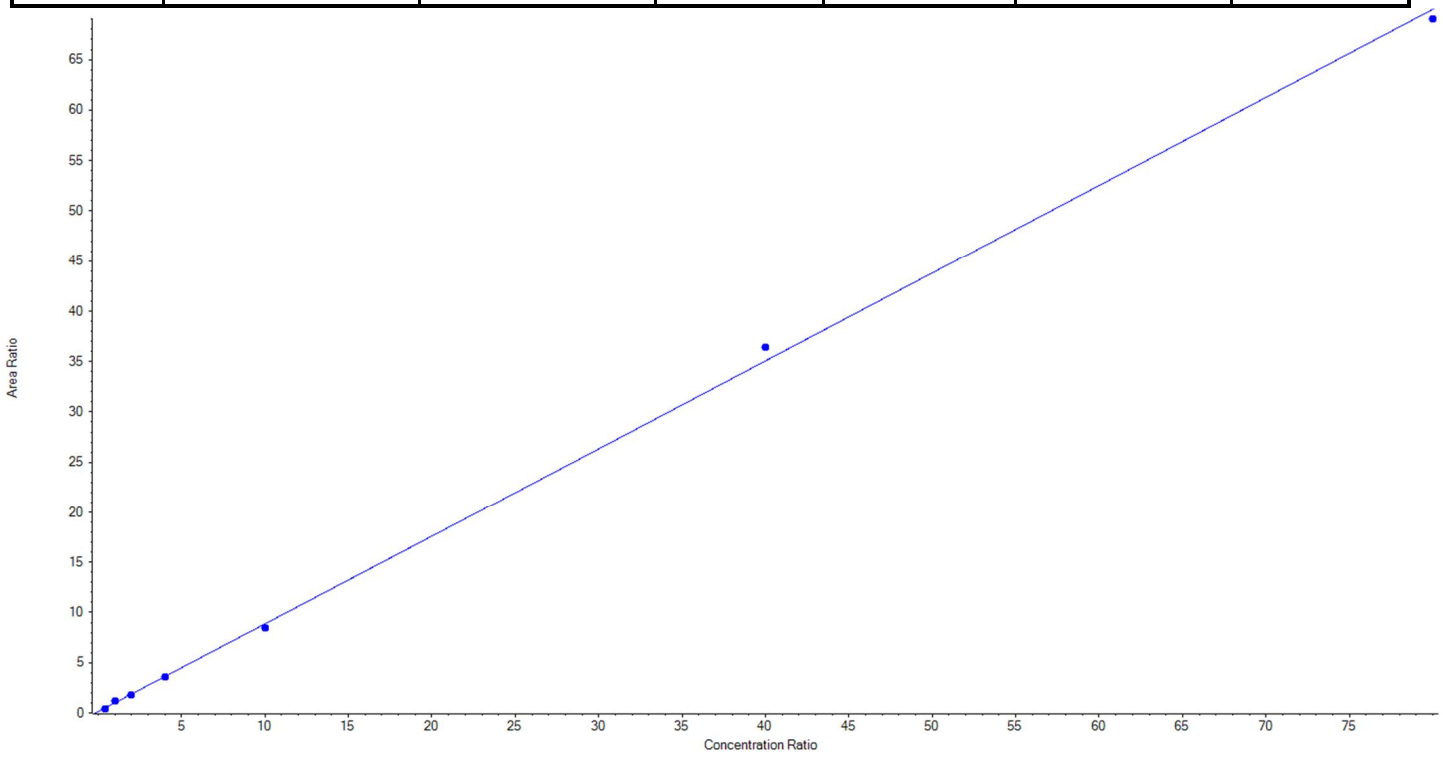
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Analyte Name	PFHpA_1	**Data File**	18-0601.wiff
MRM Transition	363.0 / 319.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.87325 x + 0.13017 (r = 0.99942) (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	89.873661	89.9
3	KB74	L2	True	250.00	297.117006	118.9
4	KB75	L3	True	500.00	476.968535	95.4
5	KB76	L4	True	1000.00	980.539024	98.1
6	KB77	L5	True	2500.00	2380.403957	95.2
7	KB78	L6	True	10000.00	10398.055976	104.0
8	KB79	L7	True	20000.00	19727.041841	98.6



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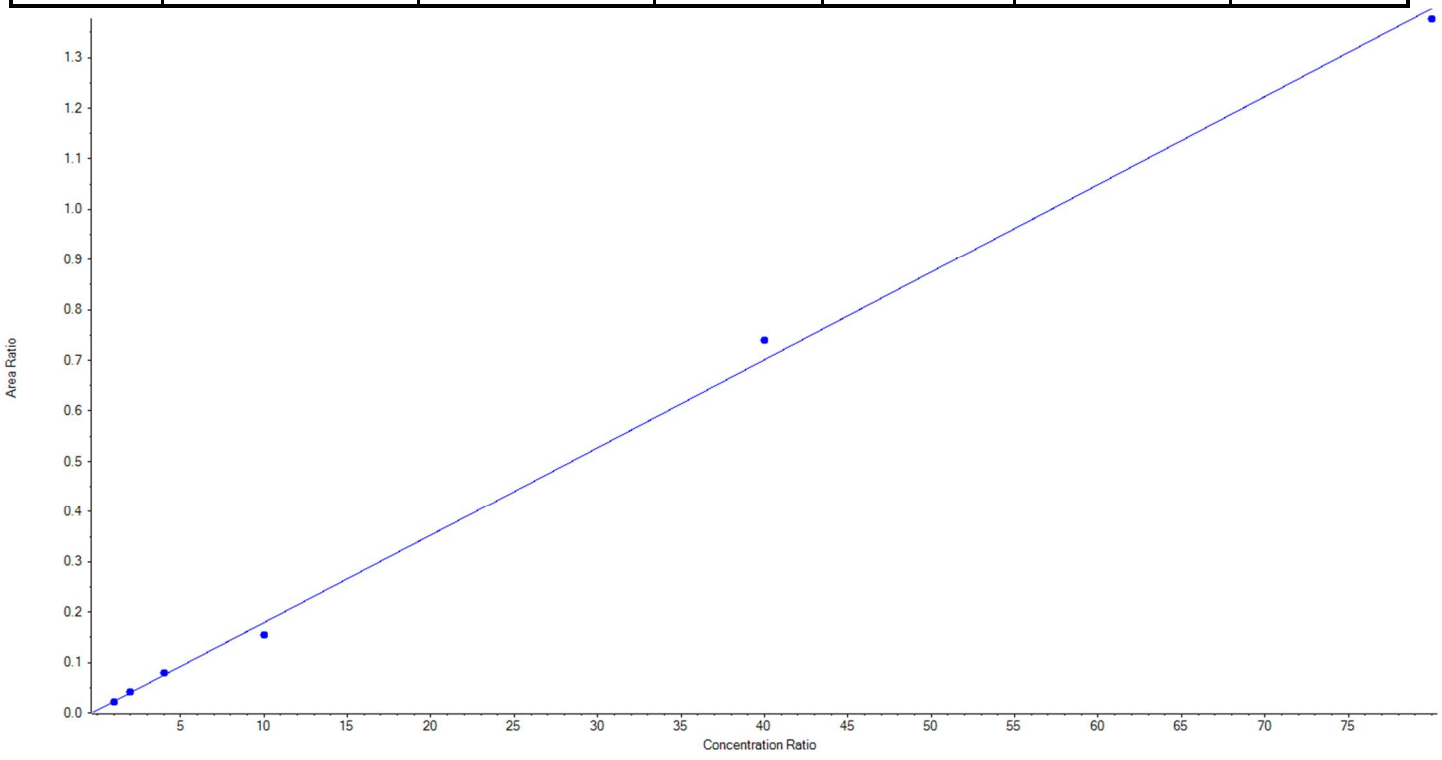
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Analyte Name	PFHpA_2	**Data File**	18-0601.wiff
MRM Transition	363.0 / 169.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C4-PFHpA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.01740 x + 0.00524 (r = 0.99849) (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	N/A	N/A
3	KB74	L2	True	250.00	239.925260	96.0
4	KB75	L3	True	500.00	532.066103	106.4
5	KB76	L4	True	1000.00	1074.132757	107.4
6	KB77	L5	True	2500.00	2156.057878	86.2
7	KB78	L6	True	10000.00	10544.398899	105.4
8	KB79	L7	True	20000.00	19703.419103	98.5



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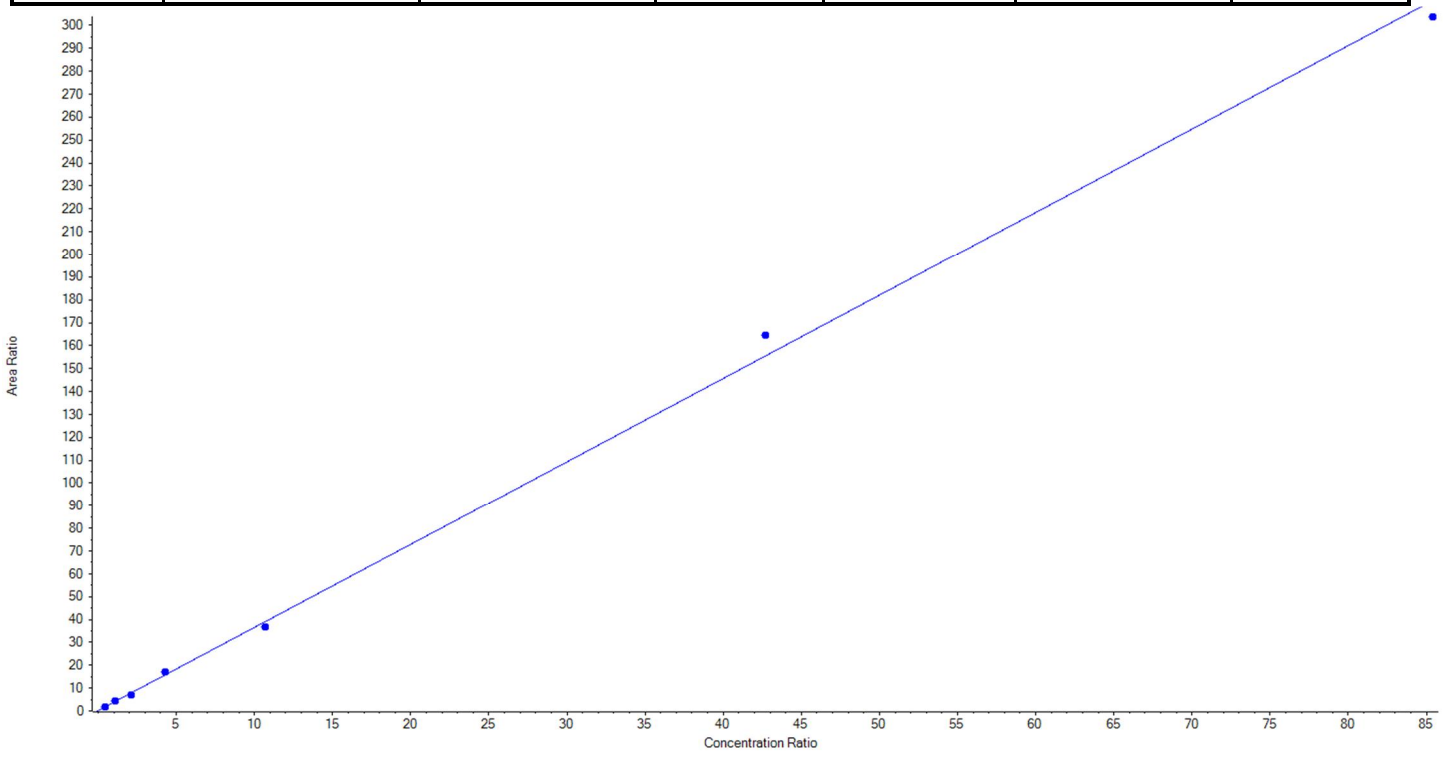
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Analyte Name	PFHxS_1	**Data File**	18-0601.wiff
MRM Transition	399.0 / 80.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 3.63703 x + 0.18629 (r = 0.99899) (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	100.517086	99.5
3	KB74	L2	True	252.50	266.028024	105.4
4	KB75	L3	True	505.00	454.394152	90.0
5	KB76	L4	True	1010.00	1088.436384	107.8
6	KB77	L5	True	2525.00	2372.812761	94.0
7	KB78	L6	True	10100.00	10676.033528	105.7
8	KB79	L7	True	20200.00	19735.278066	97.7



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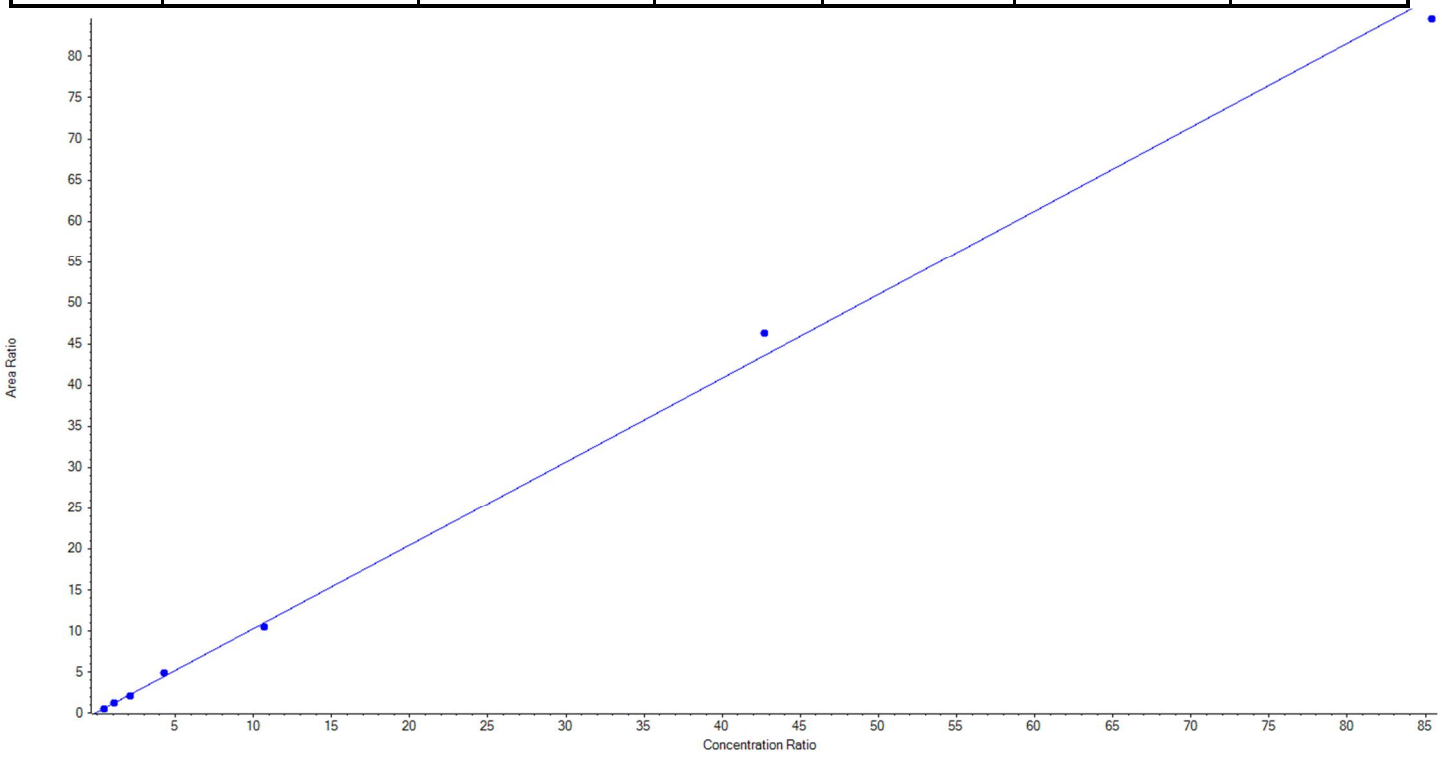
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Analyte Name	PFHxS_2	**Data File**	18-0601.wiff
MRM Transition	399.0 / 99.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C3-PFHxS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.01889 x + 0.08300 (r = 0.99880) (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	95.954083	95.0
3	KB74	L2	True	252.50	267.441050	105.9
4	KB75	L3	True	505.00	453.657269	89.8
5	KB76	L4	True	1010.00	1109.381232	109.8
6	KB77	L5	True	2525.00	2425.801995	96.1
7	KB78	L6	True	10100.00	10732.303596	106.3
8	KB79	L7	True	20200.00	19608.960774	97.1



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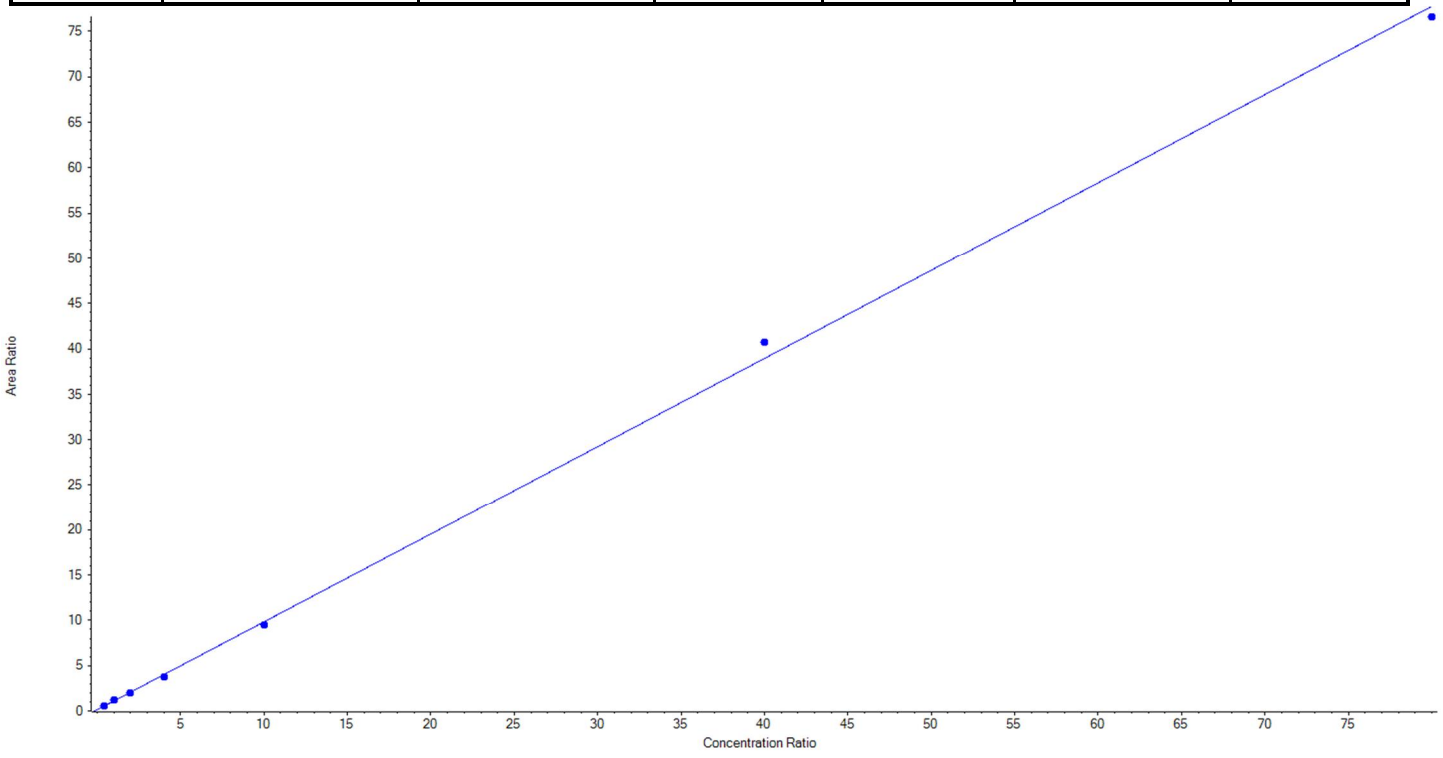
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Analyte Name	PFOA_1	**Data File**	18-0601.wiff
MRM Transition	413.0 / 369.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.97044 x + 0.12959 (r = 0.99946) (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	101.180654	101.2
3	KB74	L2	True	250.00	271.138088	108.5
4	KB75	L3	True	500.00	487.237867	97.5
5	KB76	L4	True	1000.00	935.786687	93.6
6	KB77	L5	True	2500.00	2409.578897	96.4
7	KB78	L6	True	10000.00	10445.864678	104.5
8	KB79	L7	True	20000.00	19699.213129	98.5



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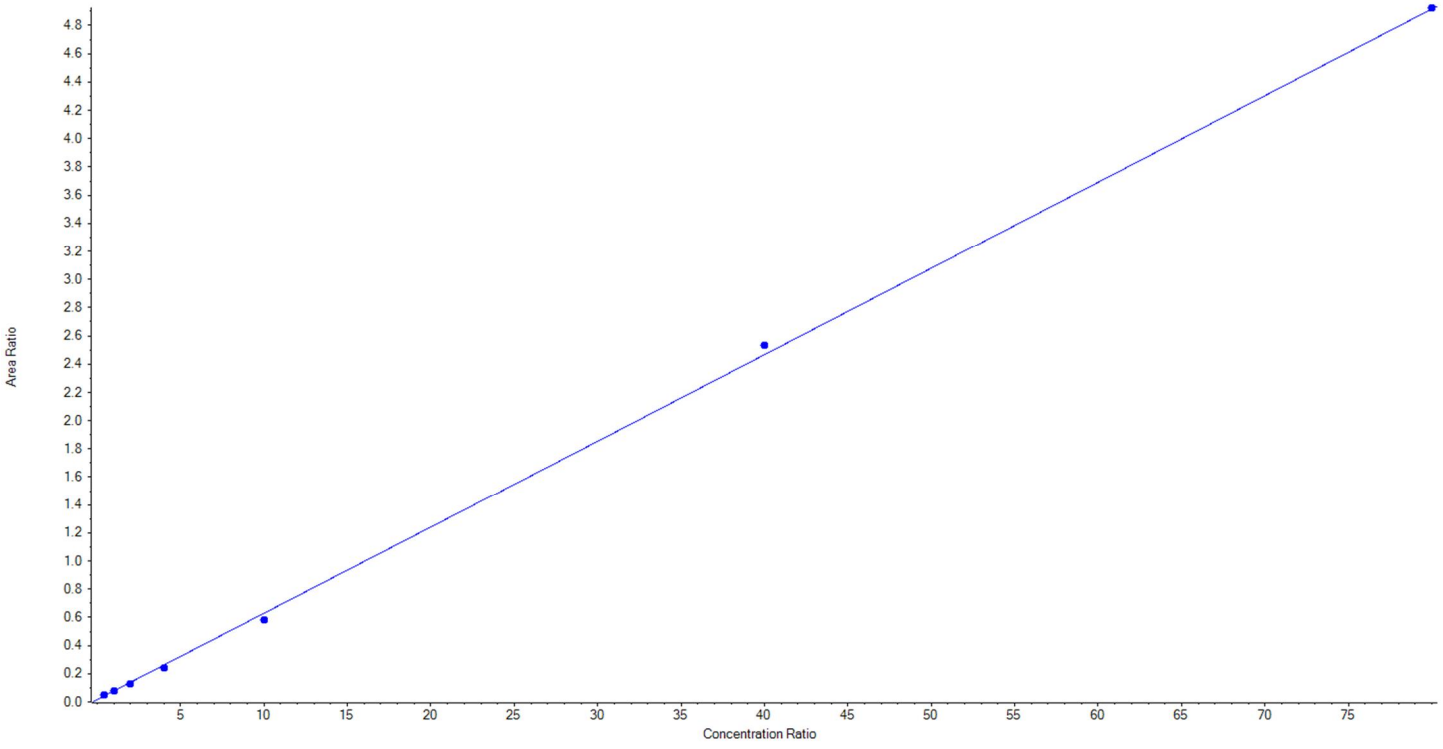
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Analyte Name	PFOA_2	**Data File**	18-0601.wiff
MRM Transition	413.0 / 169.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C8-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.06125 x + 0.01676 (r = 0.99942) (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	123.895310	123.9
3	KB74	L2	True	250.00	243.598034	97.4
4	KB75	L3	True	500.00	454.441982	90.9
5	KB76	L4	True	1000.00	926.390958	92.6
6	KB77	L5	True	2500.00	2309.165462	92.4
7	KB78	L6	True	10000.00	10261.764977	102.6
8	KB79	L7	True	20000.00	20030.743277	100.2



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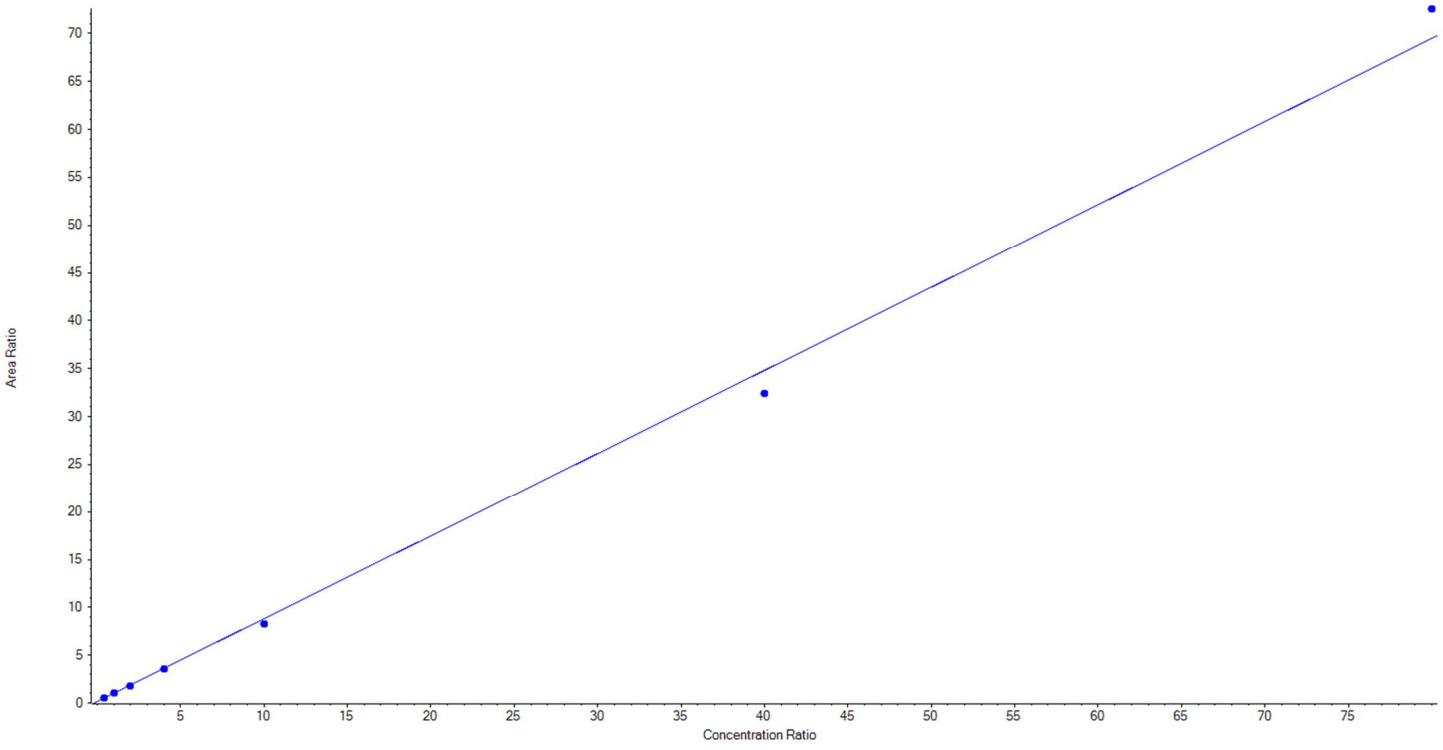
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Analyte Name	PFNA_1	**Data File**	18-0601.wiff
MRM Transition	463.0 / 419.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.86669 x + 0.14610 (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	111.732664	111.7
3	KB74	L2	True	250.00	265.554817	106.2
4	KB75	L3	True	500.00	464.587264	92.9
5	KB76	L4	True	1000.00	981.108634	98.1
6	KB77	L5	True	2500.00	2339.025833	93.6
7	KB78	L6	True	10000.00	9303.221102	93.0
8	KB79	L7	True	20000.00	20884.769686	104.4



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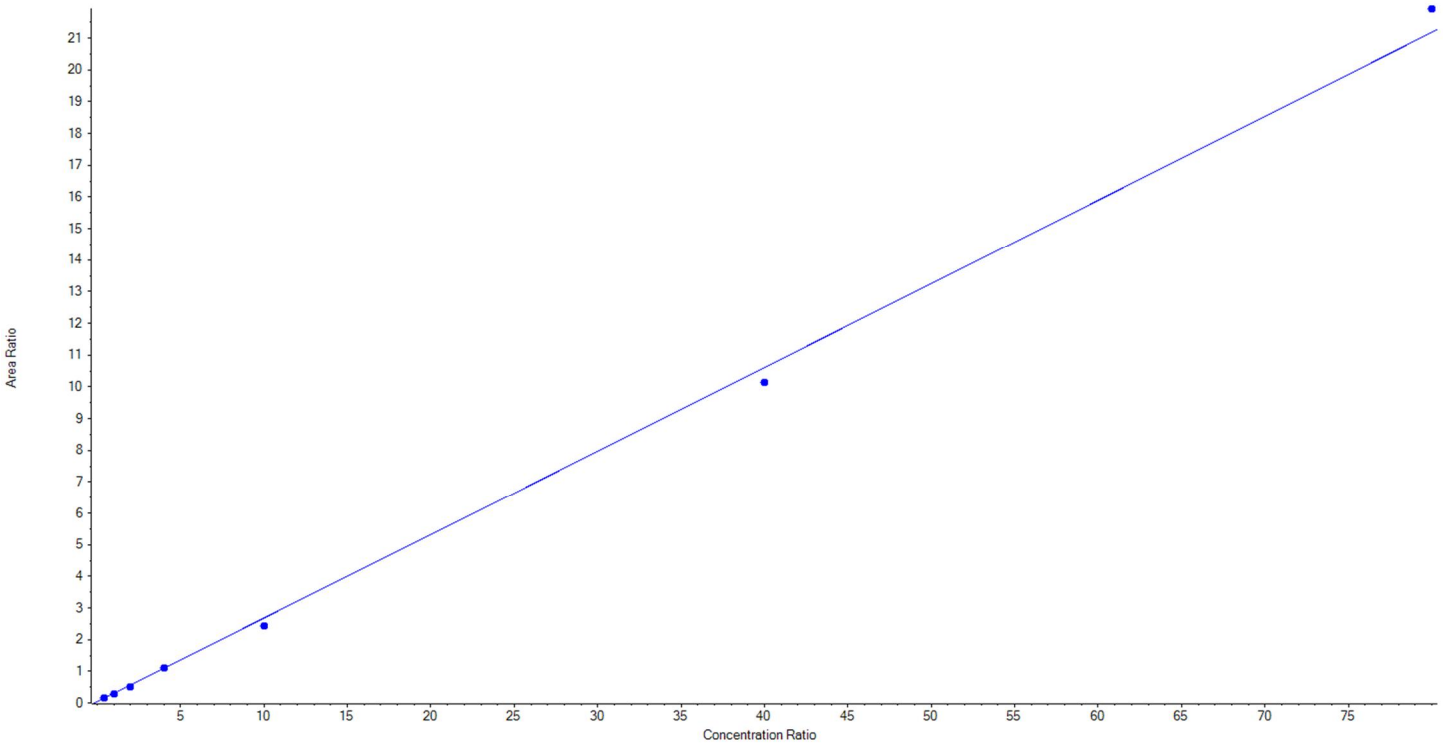
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Analyte Name	PFNA_2	**Data File**	18-0601.wiff
MRM Transition	463.0 / 219.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C9-PFNA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.26428 x + 0.03914 (r = 0.99877) (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	124.667356	124.7
3	KB74	L2	True	250.00	238.006617	95.2
4	KB75	L3	True	500.00	445.274904	89.1
5	KB76	L4	True	1000.00	1012.445509	101.2
6	KB77	L5	True	2500.00	2267.641827	90.7
7	KB78	L6	True	10000.00	9562.994751	95.6
8	KB79	L7	True	20000.00	20698.969036	103.5



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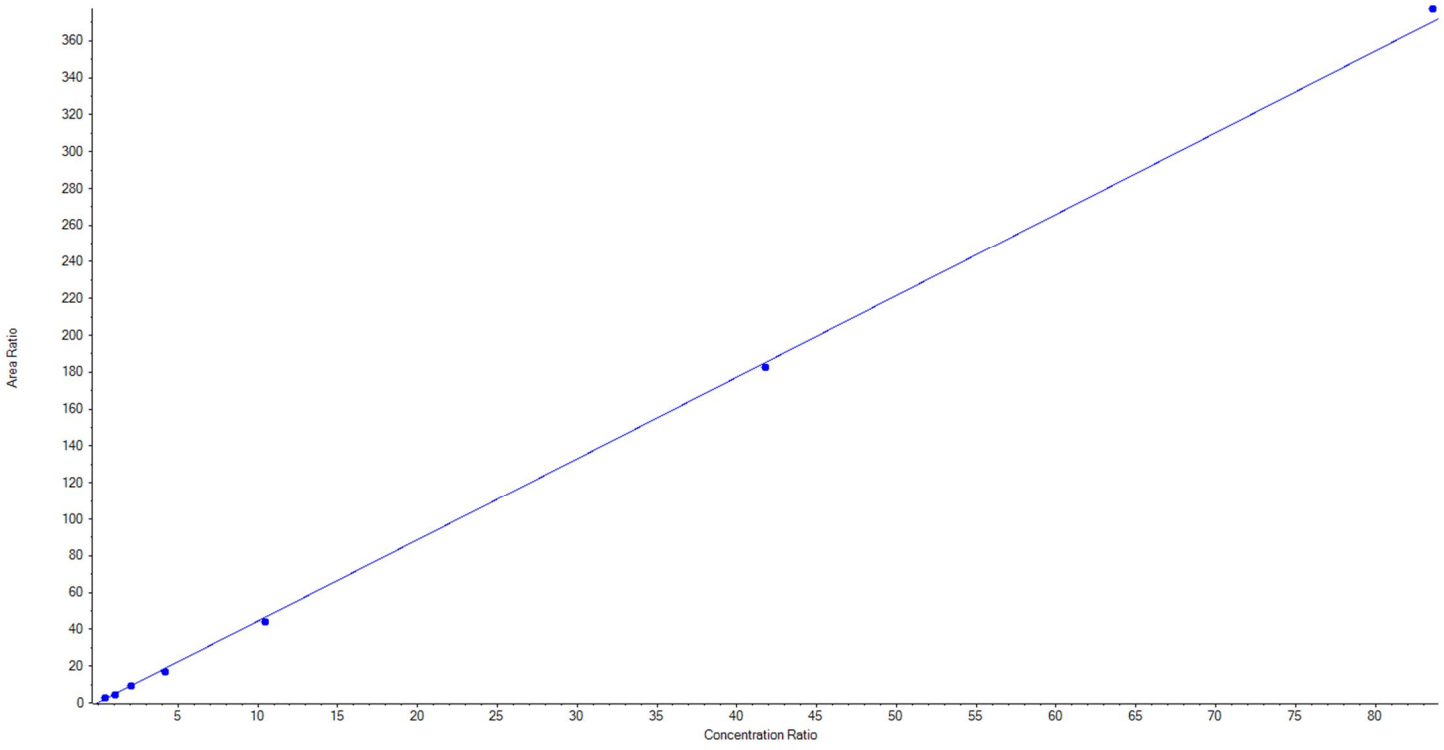
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Analyte Name	PFOS_1	**Data File**	18-0601.wiff
MRM Transition	499.0 / 80.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 4.42892 x + 0.18428 (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	100.00	123.573097	123.6
3	KB74	L2	True	250.00	231.385263	92.6
4	KB75	L3	True	500.00	490.927213	98.2
5	KB76	L4	True	1000.00	904.657366	90.5
6	KB77	L5	True	2500.00	2369.050851	94.8
7	KB78	L6	True	10000.00	9861.510766	98.6
8	KB79	L7	True	20000.00	20368.895445	101.8



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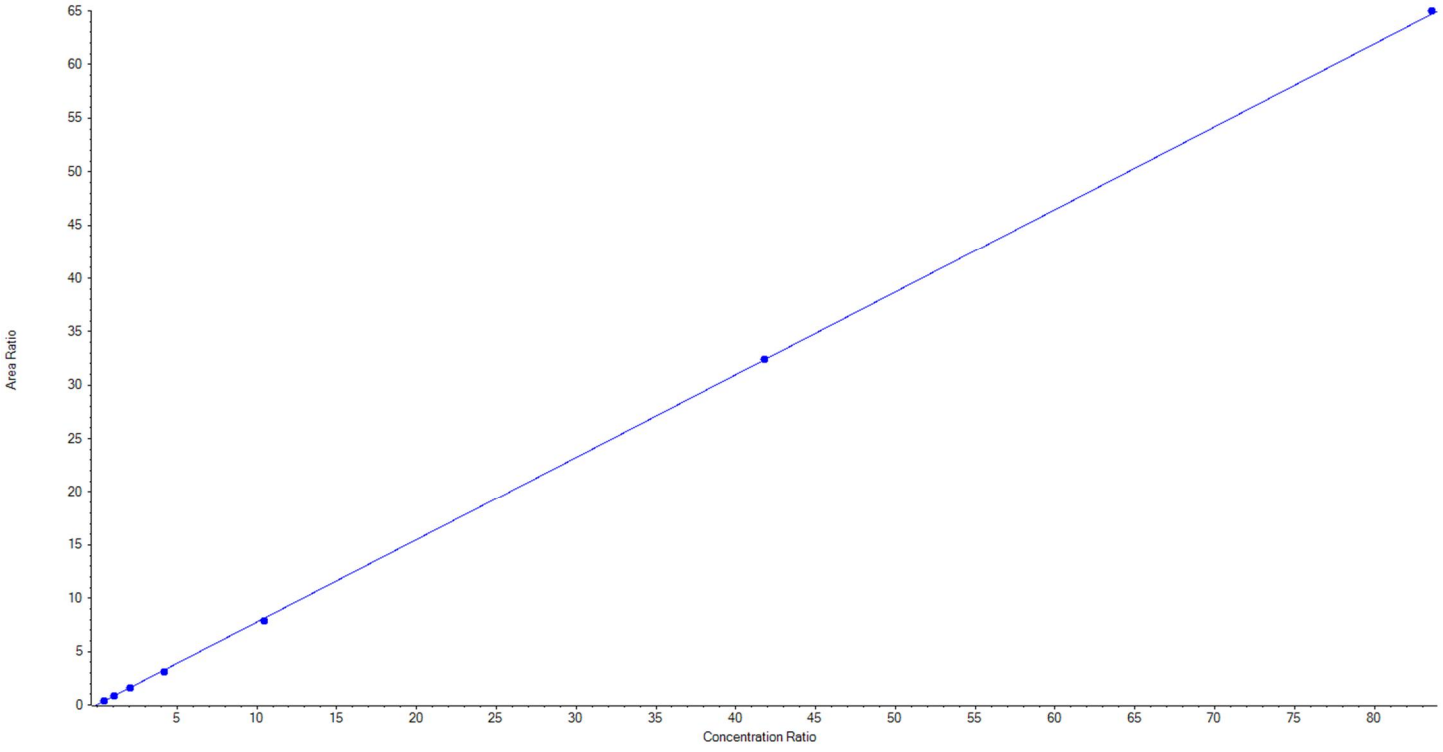
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Analyte Name	PFOS_2	**Data File**	18-0601.wiff
MRM Transition	499.0 / 99.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C8-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.77399 x + 0.01851 (r = 0.99990) (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	106.379713	106.4
3	KB74	L2	True	250.00	253.914073	101.6
4	KB75	L3	True	500.00	499.305152	99.9
5	KB76	L4	True	1000.00	940.173706	94.0
6	KB77	L5	True	2500.00	2437.291957	97.5
7	KB78	L6	True	10000.00	10023.980246	100.2
8	KB79	L7	True	20000.00	20088.955153	100.4



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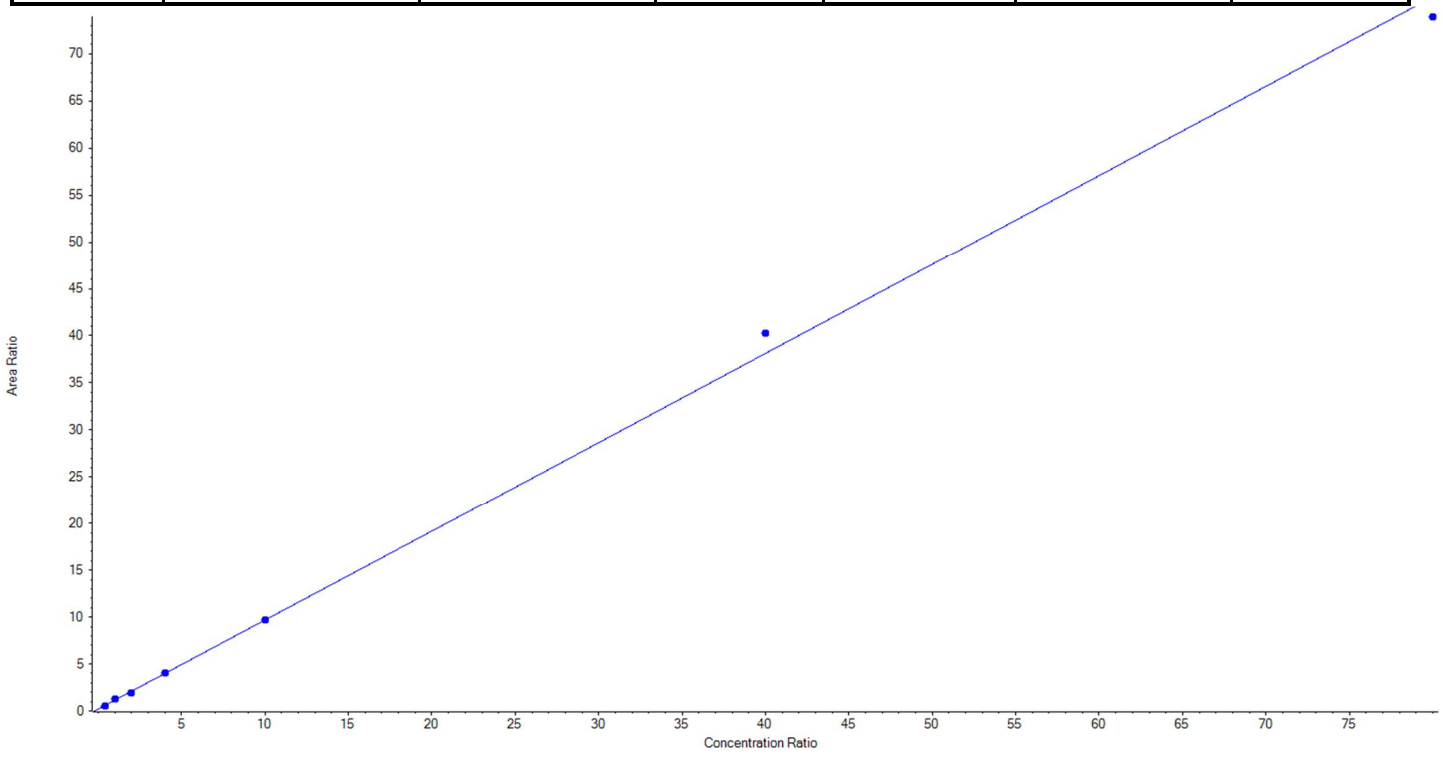
Calibration Summary Report

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Analyte Name	PFDA_1	**Data File**	18-0601.wiff
MRM Transition	513.0 / 469.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.94798 x + 0.20381 (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	91.723499	91.7
3	KB74	L2	True	250.00	283.577861	113.4
4	KB75	L3	True	500.00	458.611120	91.7
5	KB76	L4	True	1000.00	1003.320169	100.3
6	KB77	L5	True	2500.00	2495.696626	99.8
7	KB78	L6	True	10000.00	10575.579483	105.8
8	KB79	L7	True	20000.00	19441.491242	97.2



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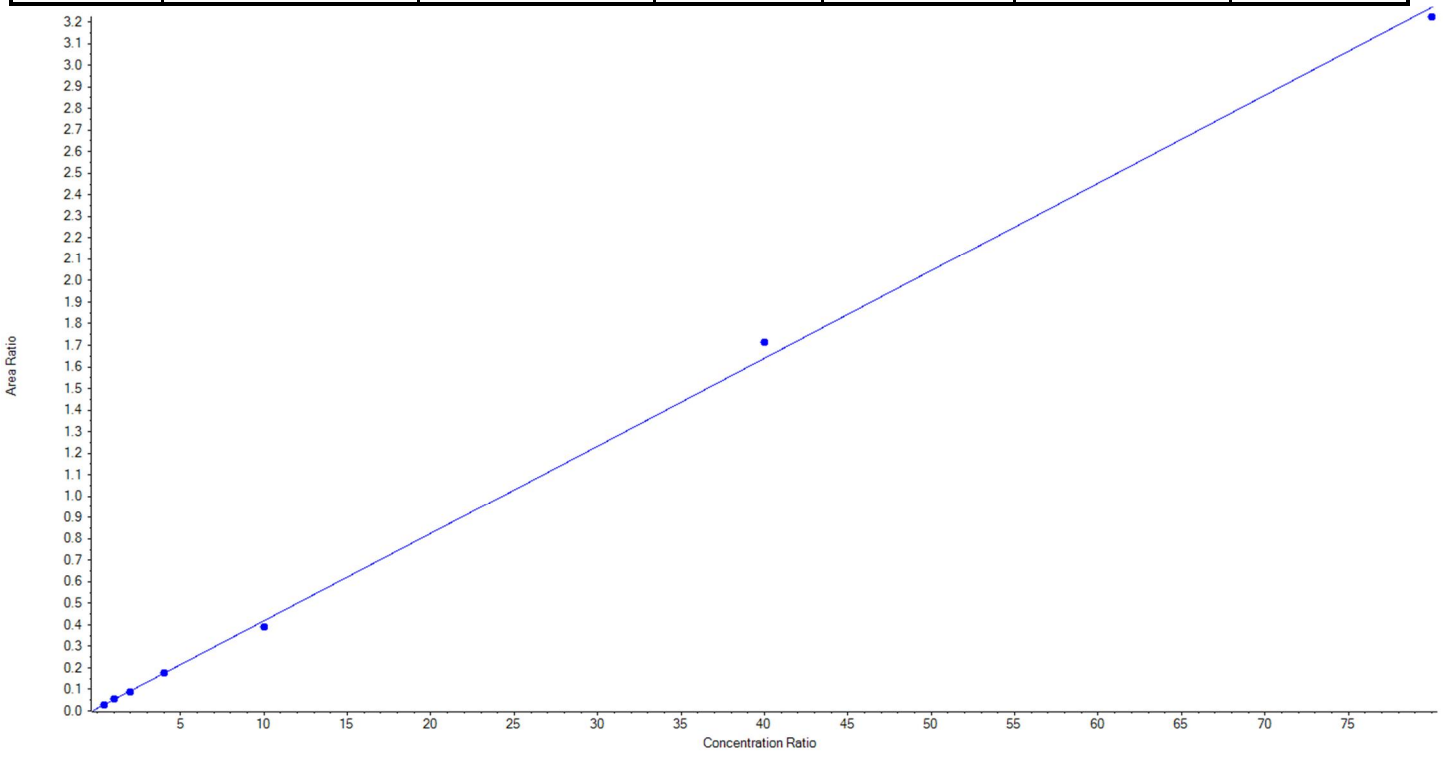
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Analyte Name	PFDA_2	**Data File**	18-0601.wiff
MRM Transition	513.0 / 219.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C6-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.04070 x + 0.01166 (r = 0.99932) (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	99.266945	99.3
3	KB74	L2	True	250.00	274.959074	110.0
4	KB75	L3	True	500.00	475.811514	95.2
5	KB76	L4	True	1000.00	998.656796	99.9
6	KB77	L5	True	2500.00	2311.427685	92.5
7	KB78	L6	True	10000.00	10462.989195	104.6
8	KB79	L7	True	20000.00	19726.888792	98.6



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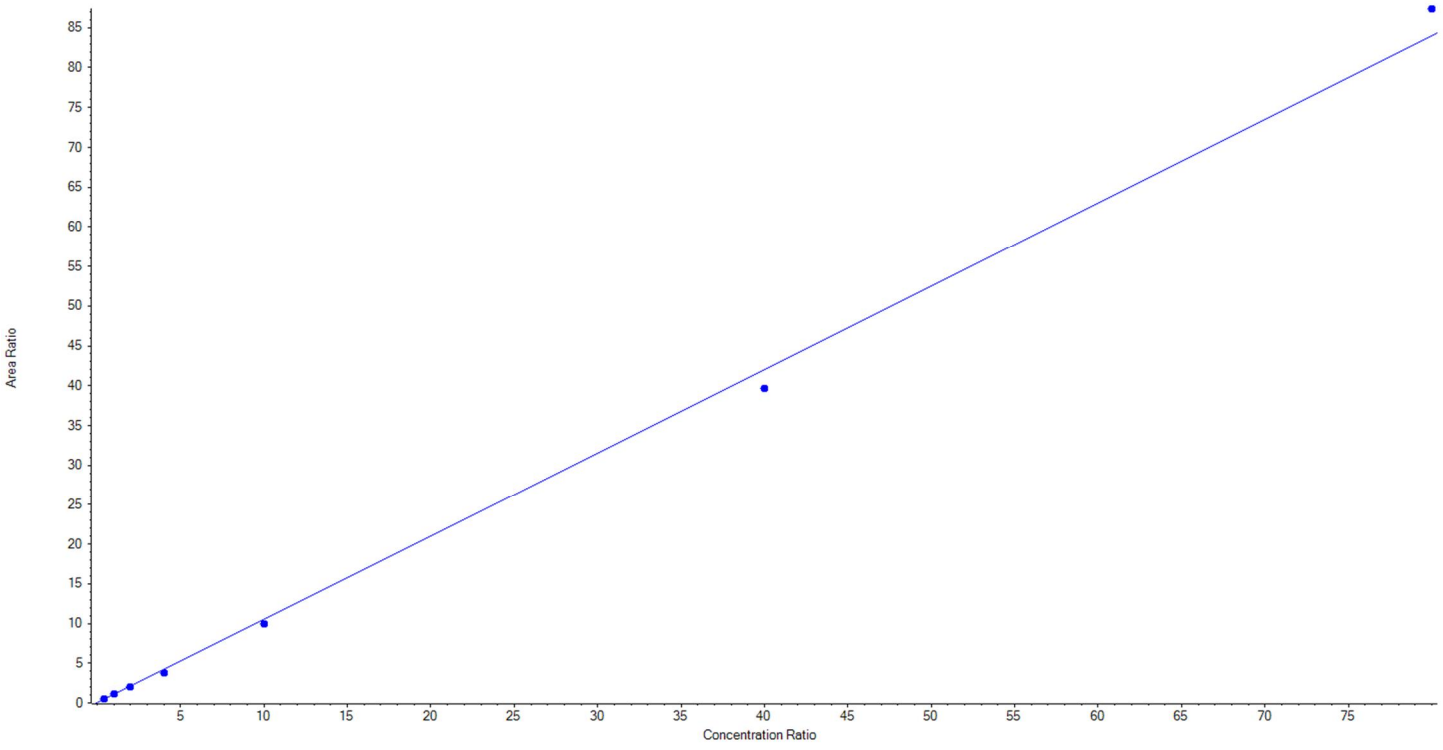
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Analyte Name	PFUnA_1	**Data File**	18-0601.wiff
MRM Transition	563.0 / 519.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.04950 x + 0.02785 (r = 0.99864) (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	116.714826	116.7
3	KB74	L2	True	250.00	257.976381	103.2
4	KB75	L3	True	500.00	486.390999	97.3
5	KB76	L4	True	1000.00	903.715490	90.4
6	KB77	L5	True	2500.00	2353.654032	94.2
7	KB78	L6	True	10000.00	9428.194009	94.3
8	KB79	L7	True	20000.00	20803.354263	104.0



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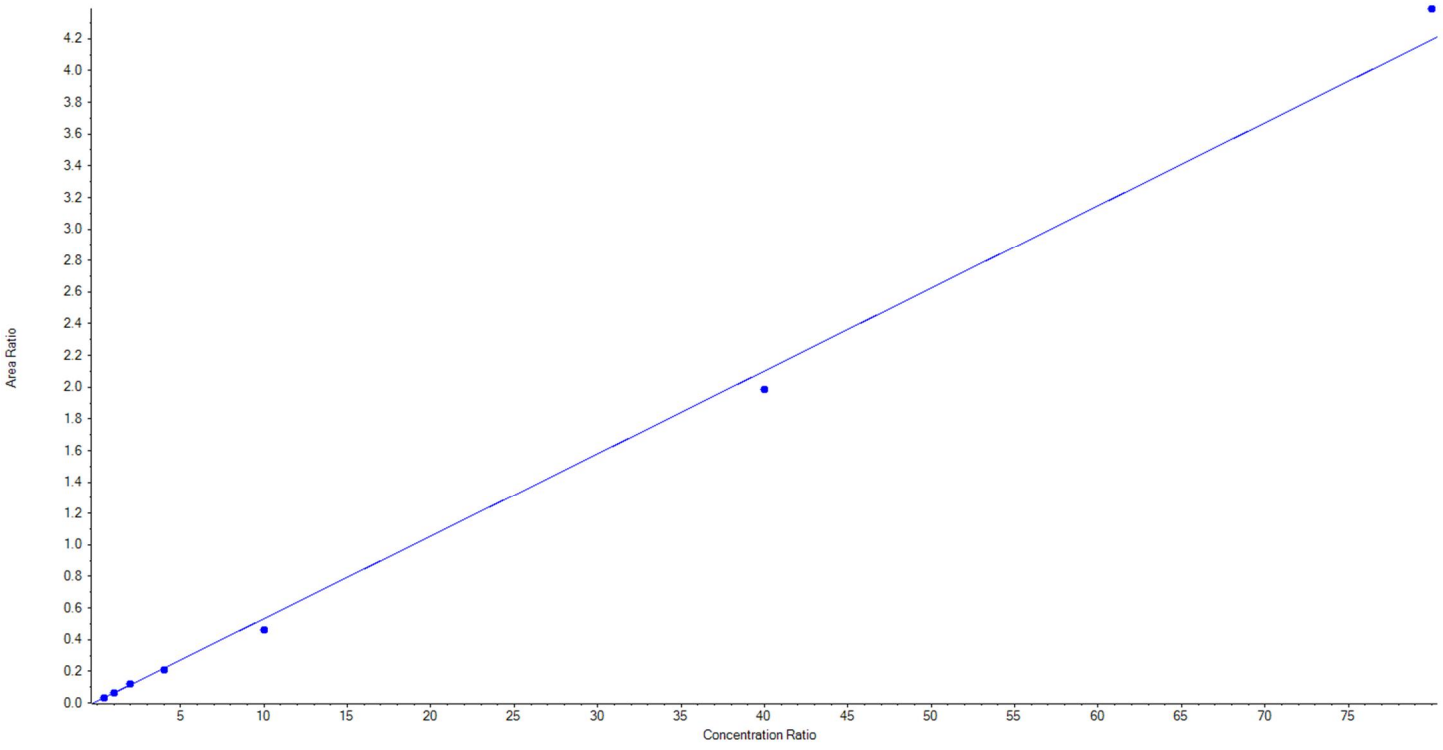
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Analyte Name	PFUnA_2	**Data File**	18-0601.wiff
MRM Transition	563.0 / 269.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C7-PFUnA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05229 x + 0.01034 (r = 0.99795) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	112.803868	112.8
3	KB74	L2	True	250.00	261.313717	104.5
4	KB75	L3	True	500.00	510.984846	102.2
5	KB76	L4	True	1000.00	956.967861	95.7
6	KB77	L5	True	2500.00	2144.779953	85.8
7	KB78	L6	True	10000.00	9433.988662	94.3
8	KB79	L7	True	20000.00	20929.161092	104.7



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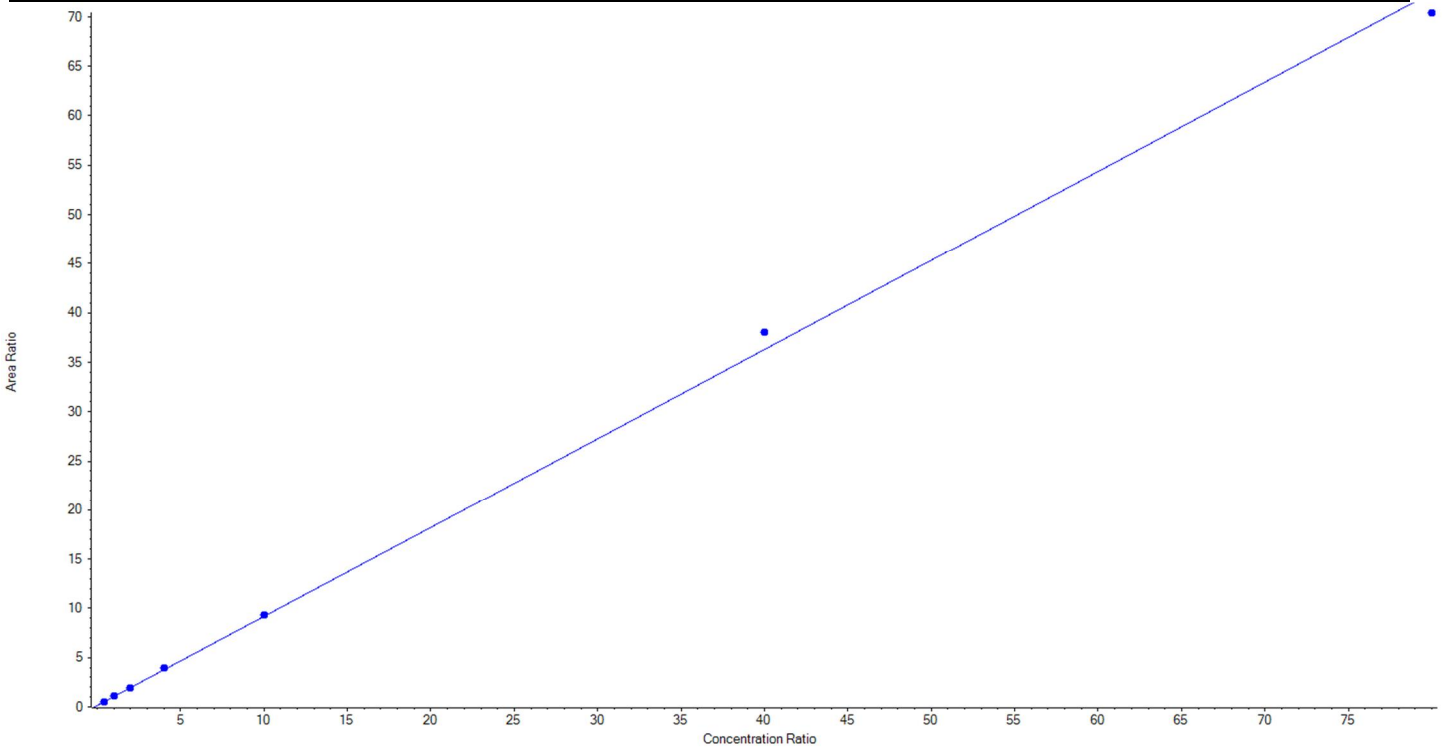
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Analyte Name	PFDoA_1	**Data File**	18-0601.wiff
MRM Transition	613.0 / 569.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.90363 x + 0.14776 (r = 0.99929) (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	87.034754	87.0
3	KB74	L2	True	250.00	263.602074	105.4
4	KB75	L3	True	500.00	494.809950	99.0
5	KB76	L4	True	1000.00	1051.603118	105.2
6	KB77	L5	True	2500.00	2534.867851	101.4
7	KB78	L6	True	10000.00	10483.397789	104.8
8	KB79	L7	True	20000.00	19434.684463	97.2



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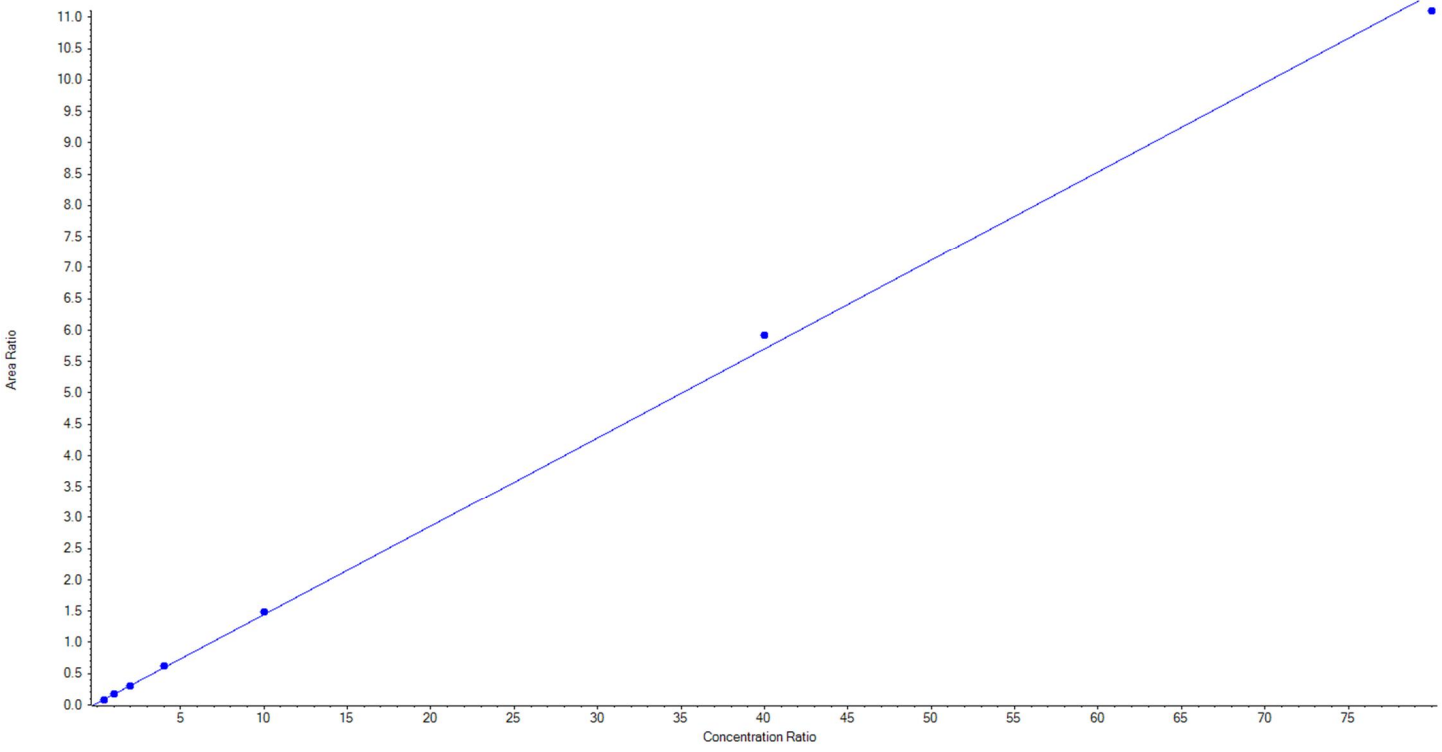
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Analyte Name	PFDoA_2	**Data File**	18-0601.wiff
MRM Transition	613.0 / 319.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C2-PFDoA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.14181 x + 0.02745 (r = 0.99951) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	89.771190	89.8
3	KB74	L2	True	250.00	258.318969	103.3
4	KB75	L3	True	500.00	490.819808	98.2
5	KB76	L4	True	1000.00	1045.219534	104.5
6	KB77	L5	True	2500.00	2572.032131	102.9
7	KB78	L6	True	10000.00	10372.966024	103.7
8	KB79	L7	True	20000.00	19520.872343	97.6



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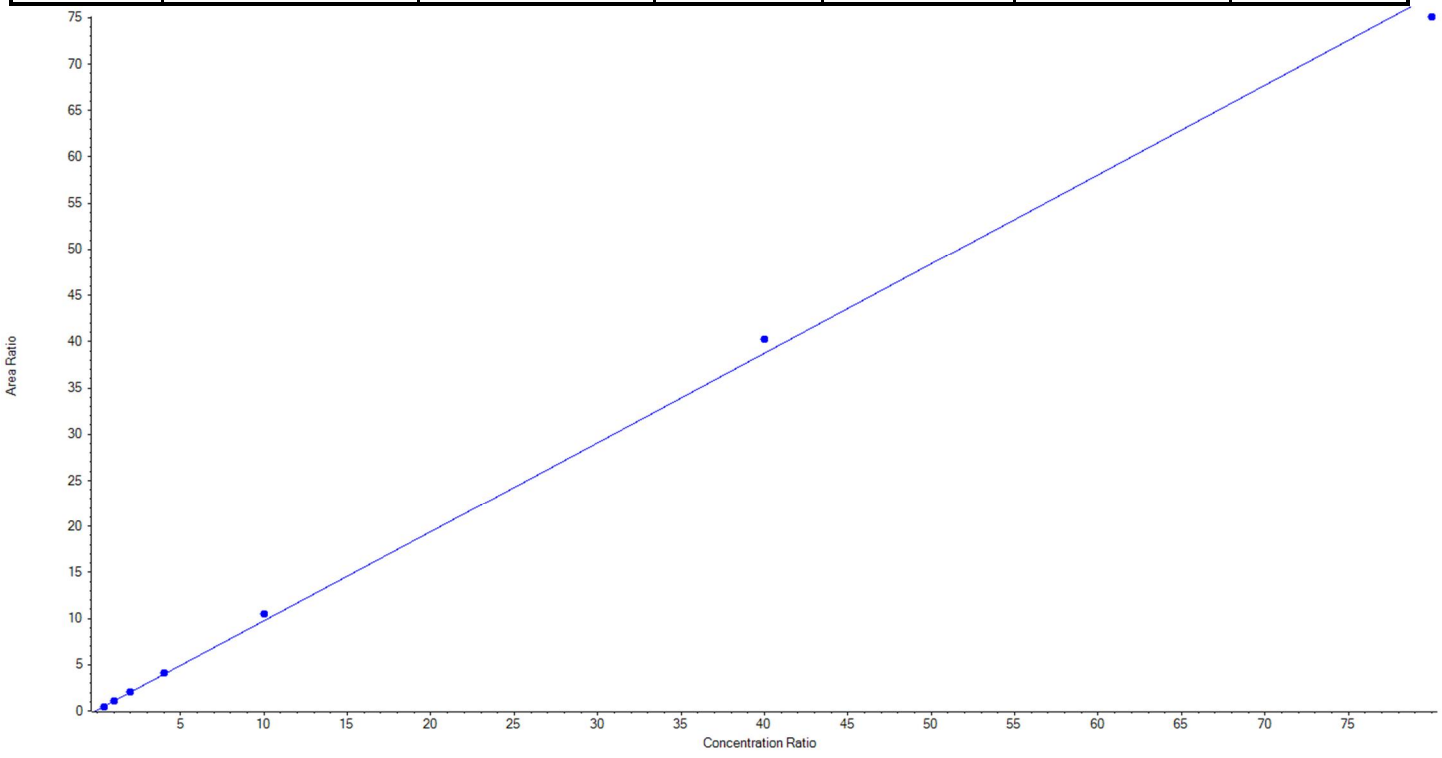
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Analyte Name	PFTrDA_1	**Data File**	18-0601.wiff
MRM Transition	663.0 / 619.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.96621 x + 0.09367 (r = 0.99921) (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	89.252137	89.3
3	KB74	L2	True	250.00	249.241065	99.7
4	KB75	L3	True	500.00	498.194197	99.6
5	KB76	L4	True	1000.00	1027.562136	102.8
6	KB77	L5	True	2500.00	2693.991009	107.8
7	KB78	L6	True	10000.00	10387.589354	103.9
8	KB79	L7	True	20000.00	19404.170102	97.0



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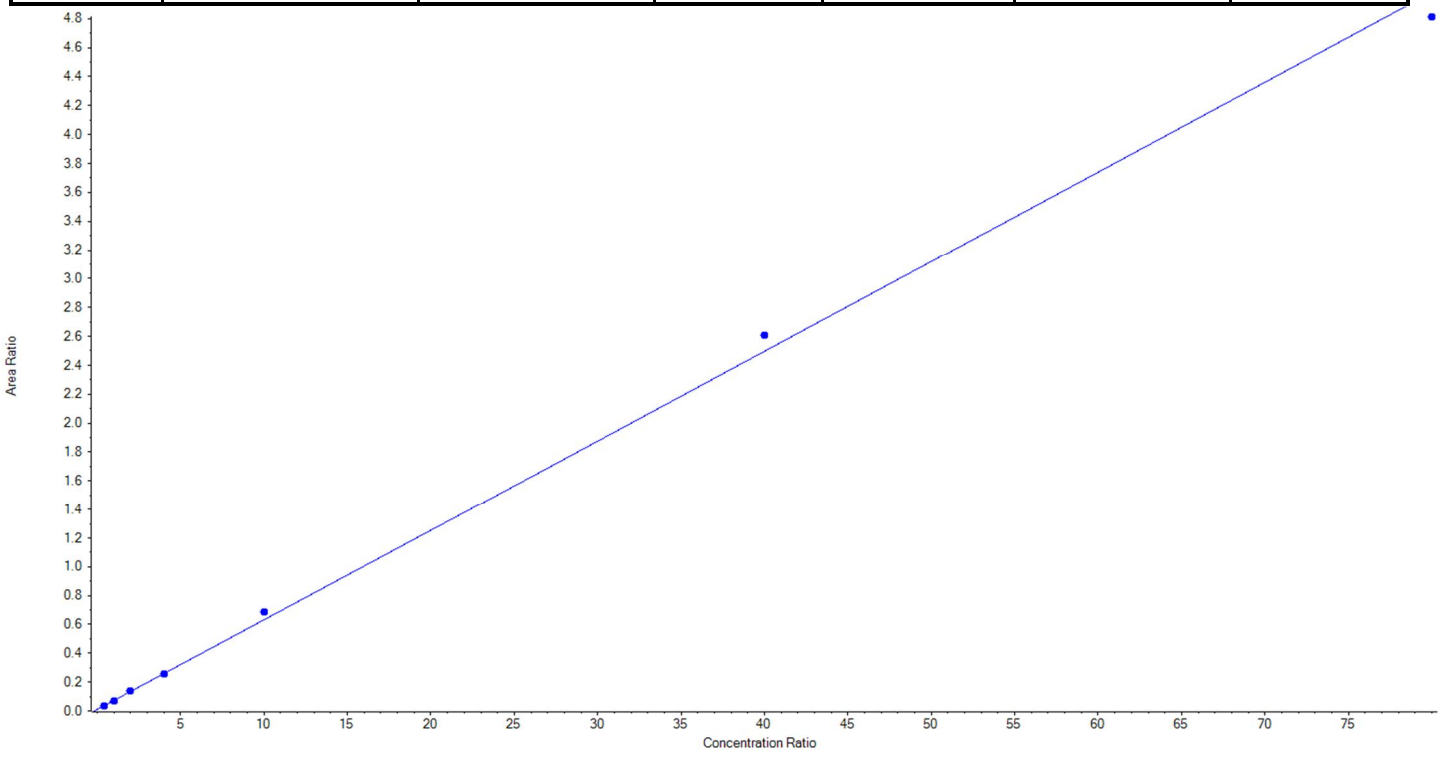
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Analyte Name	PFTrDA_2	**Data File**	18-0601.wiff
MRM Transition	663.0 / 169.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.06215 x + 0.01048 (r = 0.99891) (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	91.358244	91.4
3	KB74	L2	True	250.00	234.431195	93.8
4	KB75	L3	True	500.00	526.023755	105.2
5	KB76	L4	True	1000.00	992.847328	99.3
6	KB77	L5	True	2500.00	2730.161506	109.2
7	KB78	L6	True	10000.00	10459.488900	104.6
8	KB79	L7	True	20000.00	19315.689073	96.6



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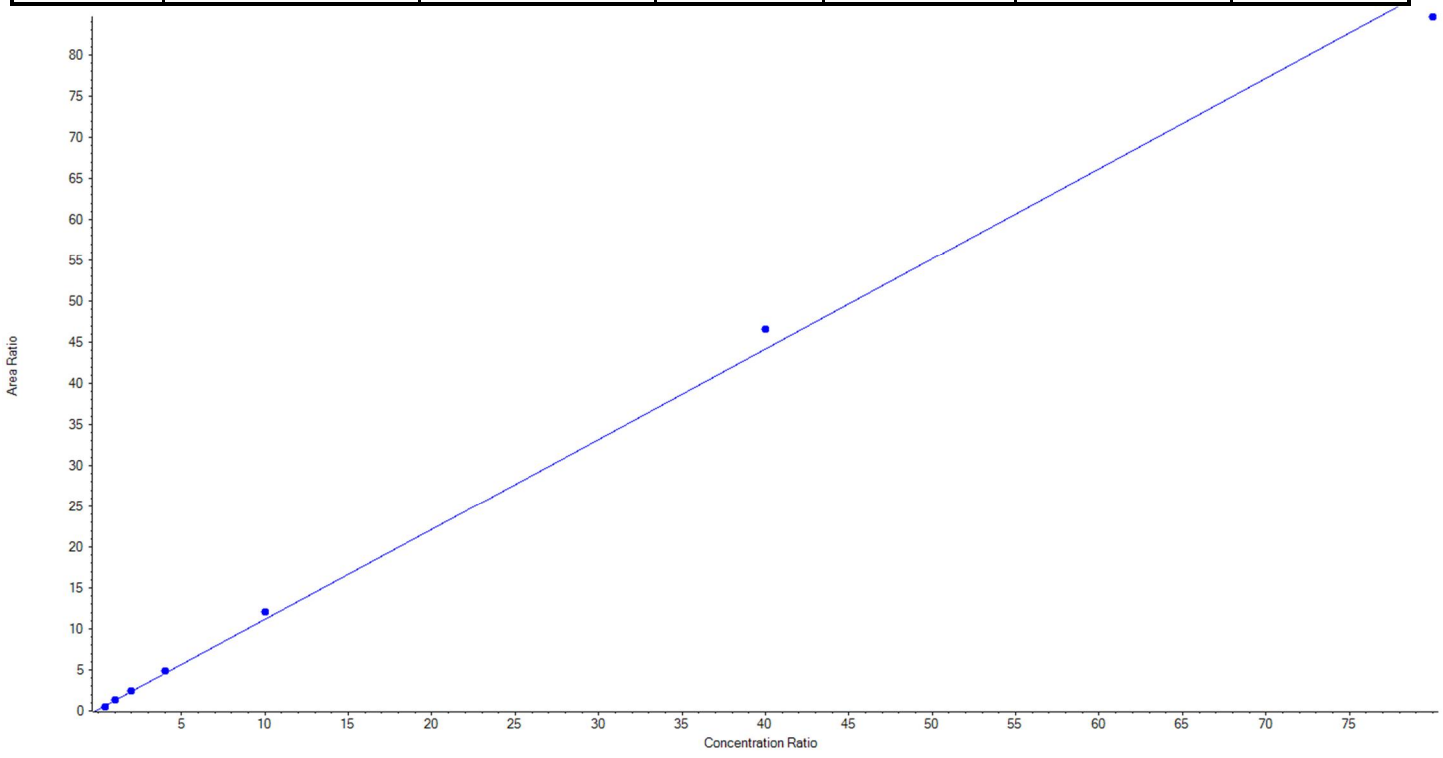
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Analyte Name	PFTeDA_1	**Data File**	18-0601.wiff
MRM Transition	713.0 / 669.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.10003 x + 0.17150 (r = 0.99862) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	81.664418	81.7
3	KB74	L2	True	250.00	253.892322	101.6
4	KB75	L3	True	500.00	504.637939	100.9
5	KB76	L4	True	1000.00	1058.184635	105.8
6	KB77	L5	True	2500.00	2716.333041	108.7
7	KB78	L6	True	10000.00	10540.568356	105.4
8	KB79	L7	True	20000.00	19194.719288	96.0



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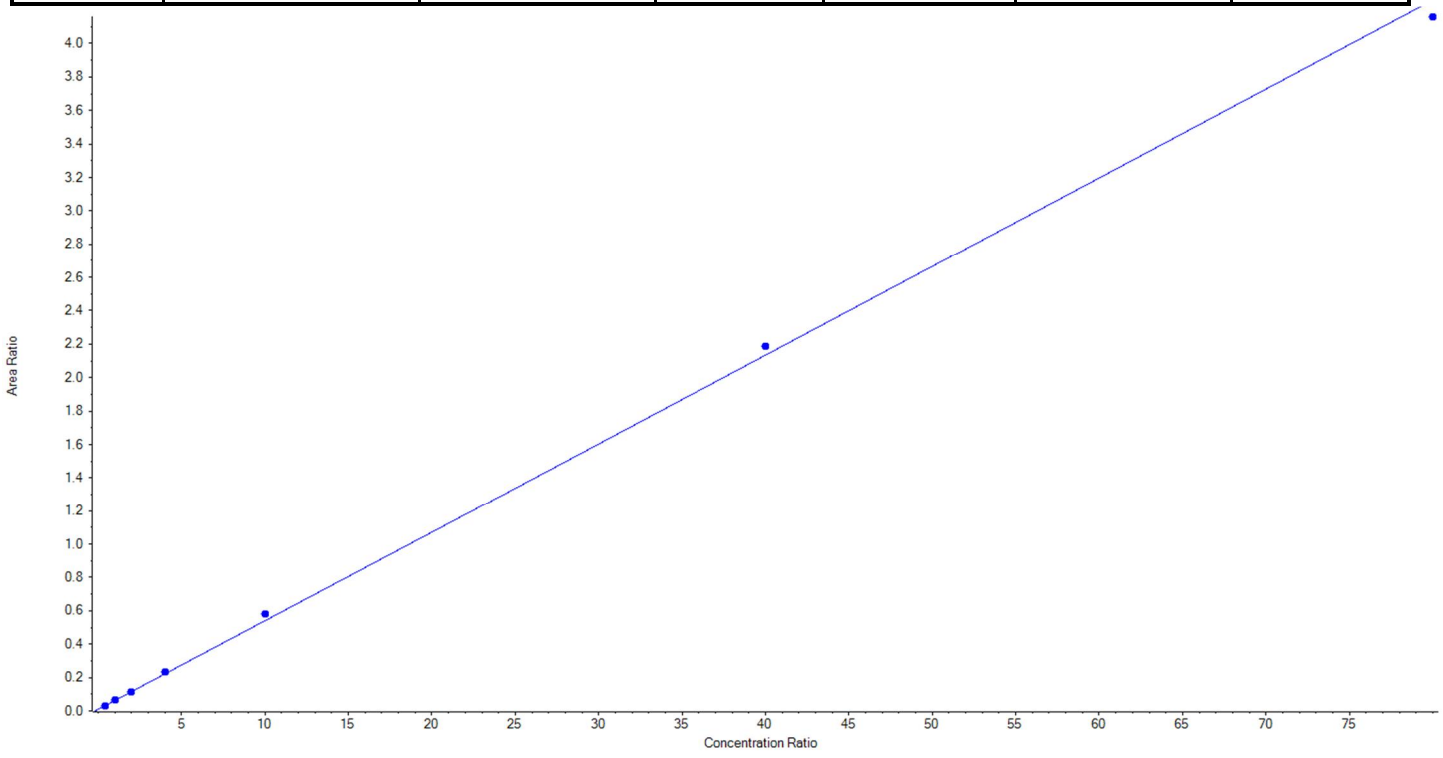
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Analyte Name	PFTeDA_2	**Data File**	18-0601.wiff
MRM Transition	713.0 / 169.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	13C2-PFTeDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.05312 x + 0.00951 (r = 0.99940) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	85.351718	85.4
3	KB74	L2	True	250.00	256.536093	102.6
4	KB75	L3	True	500.00	494.590376	98.9
5	KB76	L4	True	1000.00	1051.091061	105.1
6	KB77	L5	True	2500.00	2700.584305	108.0
7	KB78	L6	True	10000.00	10234.811734	102.4
8	KB79	L7	True	20000.00	19527.034713	97.6



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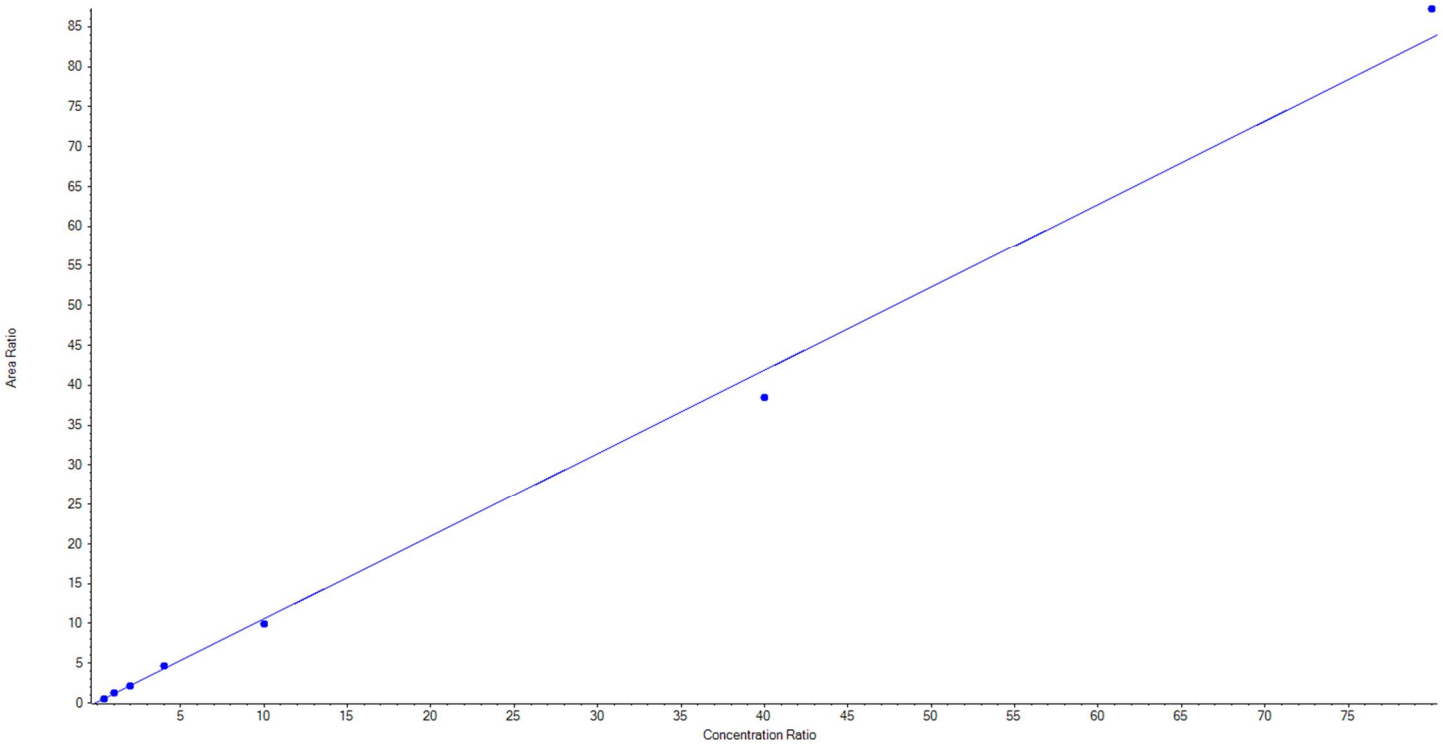
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Analyte Name	NMeFOSAA_1	**Data File**	18-0601.wiff
MRM Transition	570.0 / 419.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.04377 x + 0.12168 (r = 0.99810) (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	97.702606	97.7
3	KB74	L2	True	250.00	270.300837	108.1
4	KB75	L3	True	500.00	474.866395	95.0
5	KB76	L4	True	1000.00	1084.703812	108.5
6	KB77	L5	True	2500.00	2361.513725	94.5
7	KB78	L6	True	10000.00	9193.657335	91.9
8	KB79	L7	True	20000.00	20867.255290	104.3



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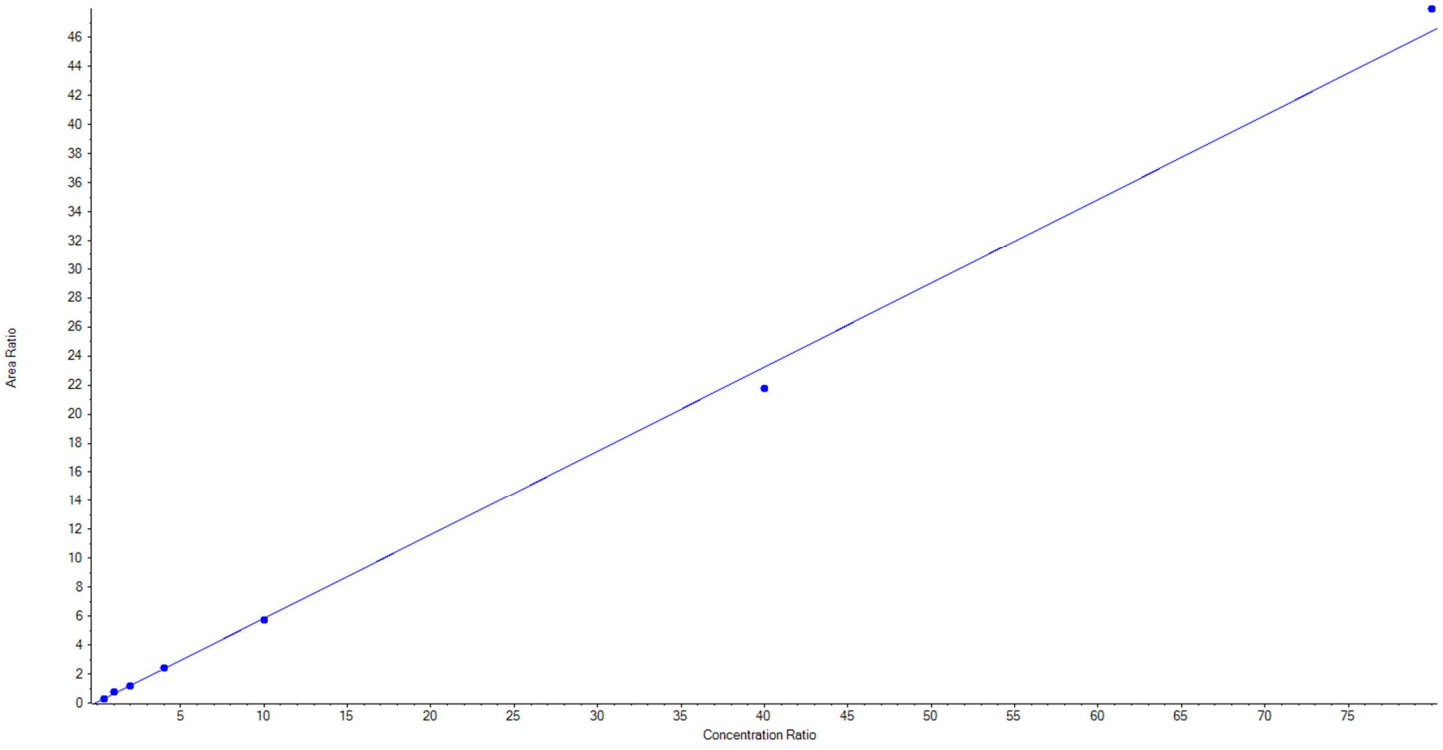
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Analyte Name	NMeFOSAA_2	**Data File**	18-0601.wiff
MRM Transition	570.0 / 512.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	d3-MeFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.57999 x + 0.04045 (r = 0.99882) (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	88.881031	88.9
3	KB74	L2	True	250.00	298.534462	119.4
4	KB75	L3	True	500.00	476.944765	95.4
5	KB76	L4	True	1000.00	1013.211747	101.3
6	KB77	L5	True	2500.00	2451.833697	98.1
7	KB78	L6	True	10000.00	9363.747452	93.6
8	KB79	L7	True	20000.00	20656.846846	103.3



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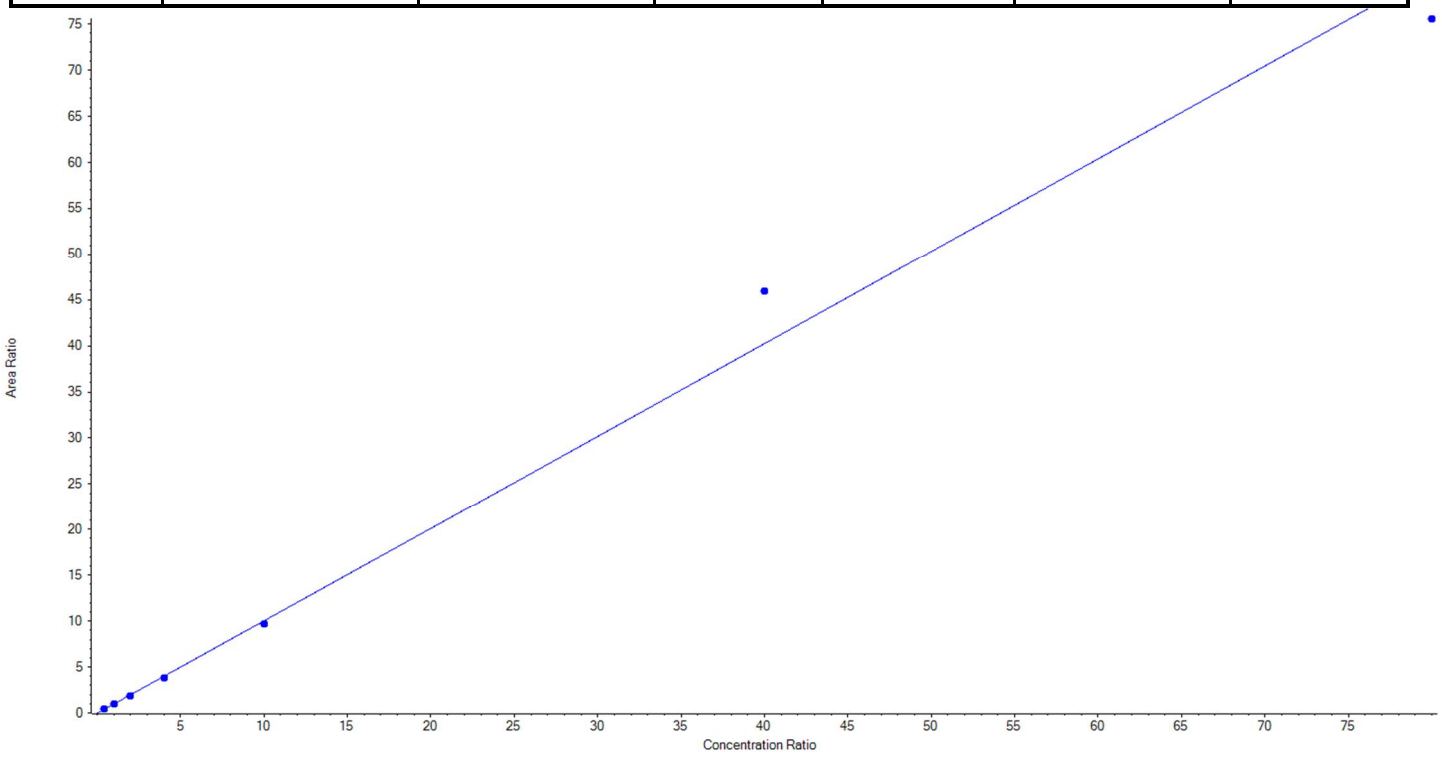
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Analyte Name	NEtFOSAA_1	**Data File**	18-0601.wiff
MRM Transition	584.0 / 419.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.00705 x + -0.04135 (r = 0.99555) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	111.213907	111.2
3	KB74	L2	True	250.00	243.571968	97.4
4	KB75	L3	True	500.00	459.435665	91.9
5	KB76	L4	True	1000.00	949.960545	95.0
6	KB77	L5	True	2500.00	2415.081451	96.6
7	KB78	L6	True	10000.00	11403.435561	114.0
8	KB79	L7	True	20000.00	18767.300903	93.8



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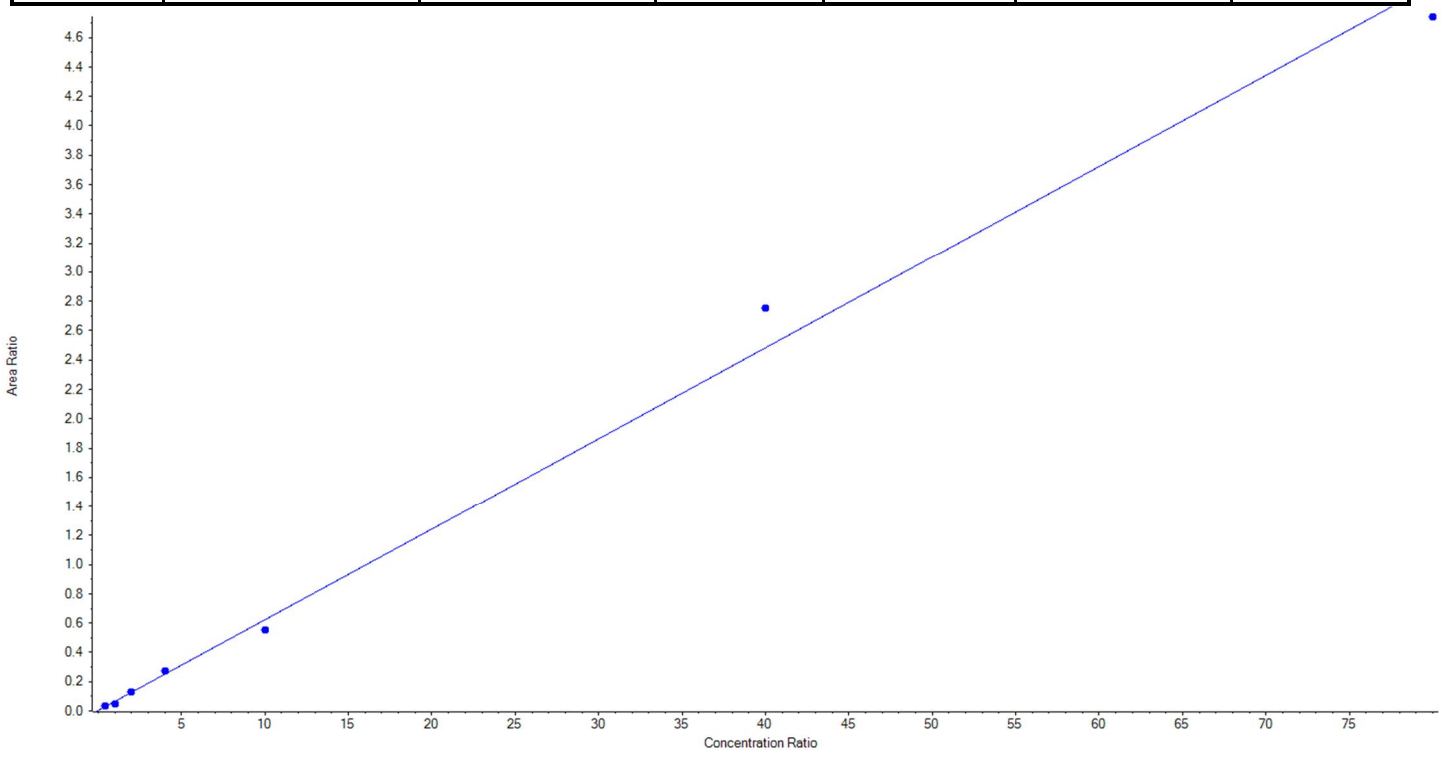
Calibration Summary Report

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Analyte Name	NEtFOSAA_2	**Data File**	18-0601.wiff
MRM Transition	584.0 / 483.0	**Result Table**	18-0581_18-0584_BASE
Internal Standard	d5-EtFOSAA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.06200 x + 0.00309 (r = 0.99661) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	100.00	113.055246	113.1
3	KB74	L2	True	250.00	192.274109	76.9
4	KB75	L3	True	500.00	523.159531	104.6
5	KB76	L4	True	1000.00	1098.825316	109.9
6	KB77	L5	True	2500.00	2227.146413	89.1
7	KB78	L6	True	10000.00	11091.423822	110.9
8	KB79	L7	True	20000.00	19104.115563	95.5



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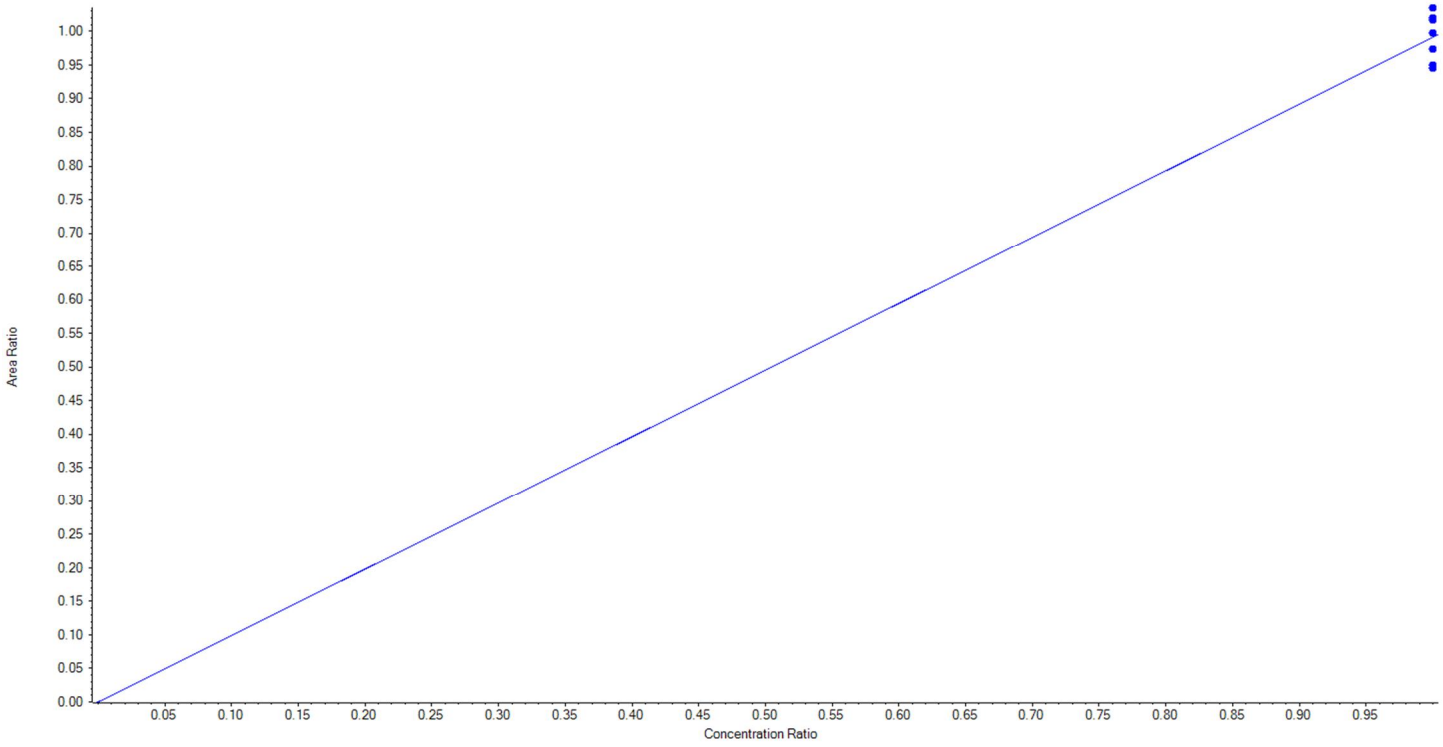
Calibration Summary Report

Created with Analyst Reporter
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Analyte Name	13C2-PFDoA	**Data File**	18-0601.wiff
MRM Transition	615.0 / 570.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.99109 x (std. dev. = 0.03544) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	261.067103	104.4
3	KB74	L2	True	250.00	251.483375	100.6
4	KB75	L3	True	250.00	239.647507	95.9
5	KB76	L4	True	250.00	238.494454	95.4
6	KB77	L5	True	250.00	245.526180	98.2
7	KB78	L6	True	250.00	257.211777	102.9
8	KB79	L7	True	250.00	256.569603	102.6



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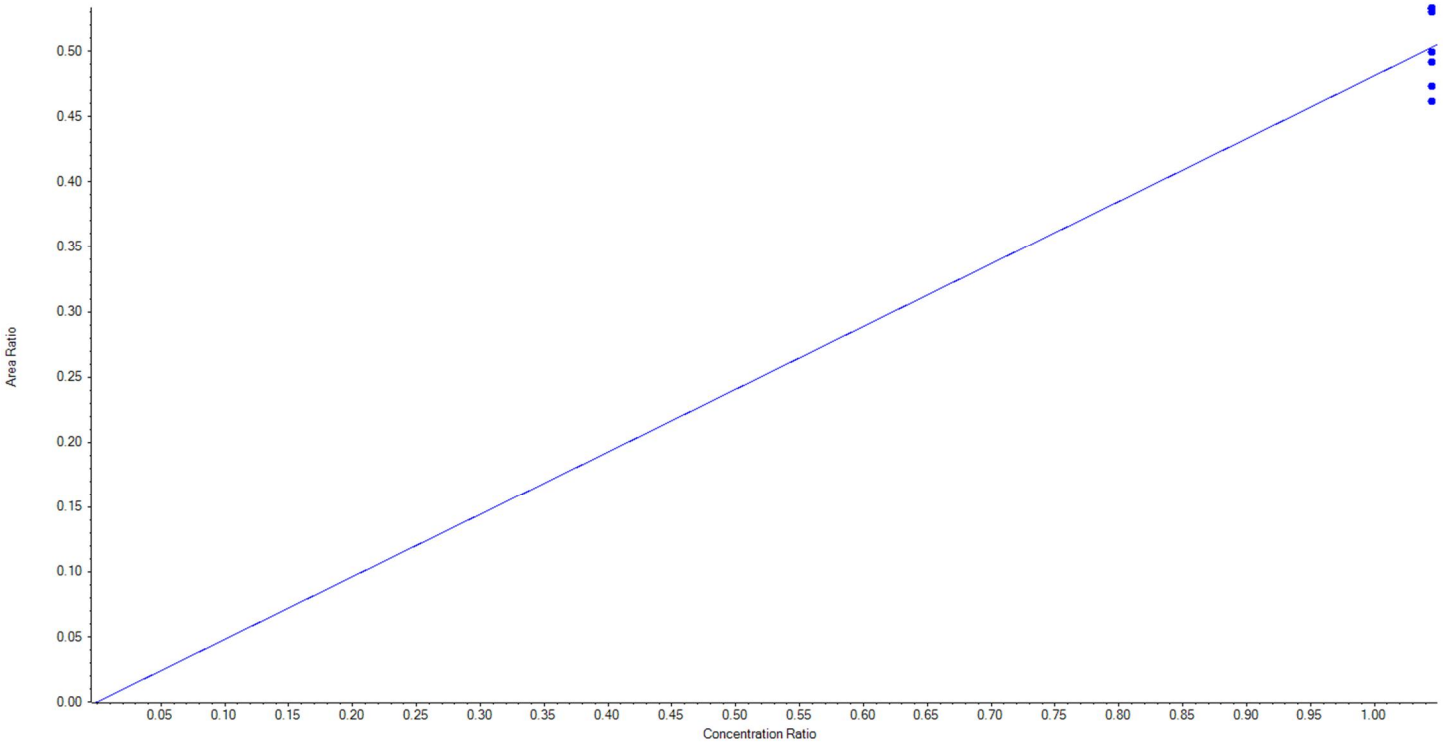
Calibration Summary Report

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Analyte Name	d3-MeFOSAA	**Data File**	18-0601.wiff
MRM Transition	573.0 / 419.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.48131 x (std. dev. = 0.02834) (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	265.038957	106.0
3	KB74	L2	True	250.00	229.387671	91.8
4	KB75	L3	True	250.00	264.549518	105.8
5	KB76	L4	True	250.00	244.355224	97.7
6	KB77	L5	True	250.00	248.061714	99.2
7	KB78	L6	True	250.00	235.150088	94.1
8	KB79	L7	True	250.00	263.456828	105.4



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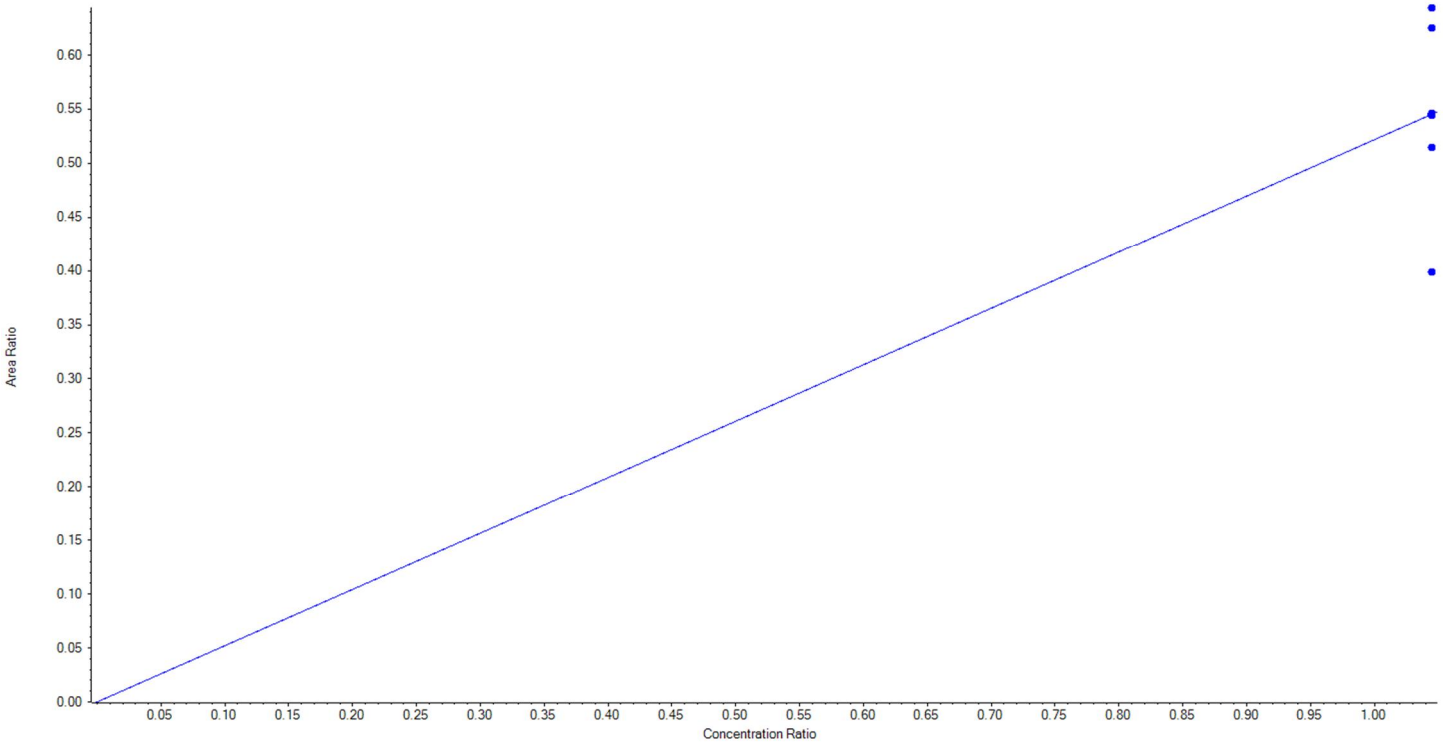
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/10/2018 1:54:34 PM

Analyte Name	d5-EtFOSAA	**Data File**	18-0601.wiff
MRM Transition	589.0 / 419.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.52182 x (std. dev. = 0.07654) (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	250.047206	100.0
3	KB74	L2	True	250.00	286.441908	114.6
4	KB75	L3	True	250.00	295.041431	118.0
5	KB76	L4	True	250.00	250.345681	100.1
6	KB77	L5	True	250.00	235.944297	94.4
7	KB78	L6	True	250.00	182.824015	73.1
8	KB79	L7	True	250.00	249.355462	99.7



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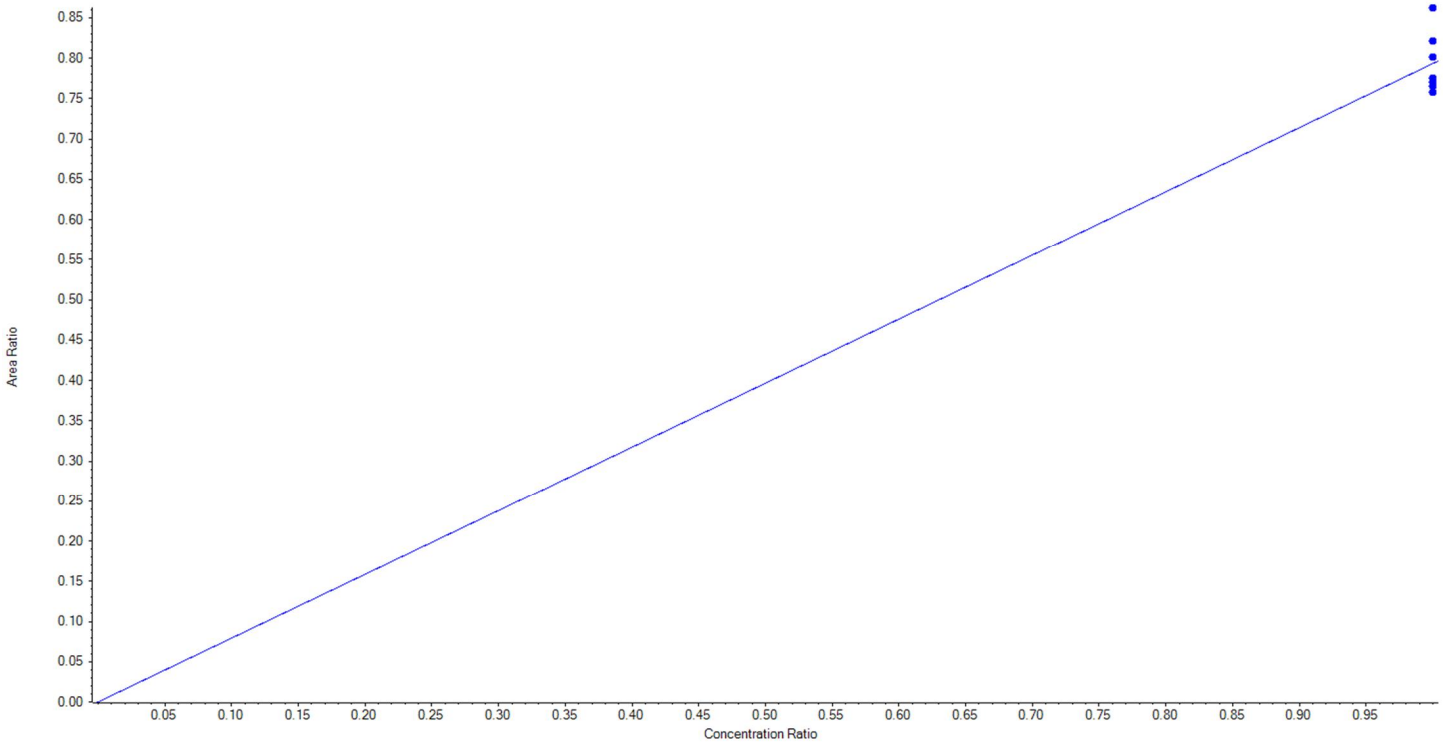
Calibration Summary Report

Created with Analyst Reporter
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Analyte Name	13C5-PFHxA	**Data File**	18-0601.wiff
MRM Transition	318.0 / 273.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.79340 x (std. dev. = 0.03745) (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	252.344194	100.9
3	KB74	L2	True	250.00	244.342821	97.7
4	KB75	L3	True	250.00	258.675787	103.5
5	KB76	L4	True	250.00	241.044127	96.4
6	KB77	L5	True	250.00	242.891692	97.2
7	KB78	L6	True	250.00	239.001083	95.6
8	KB79	L7	True	250.00	271.700296	108.7



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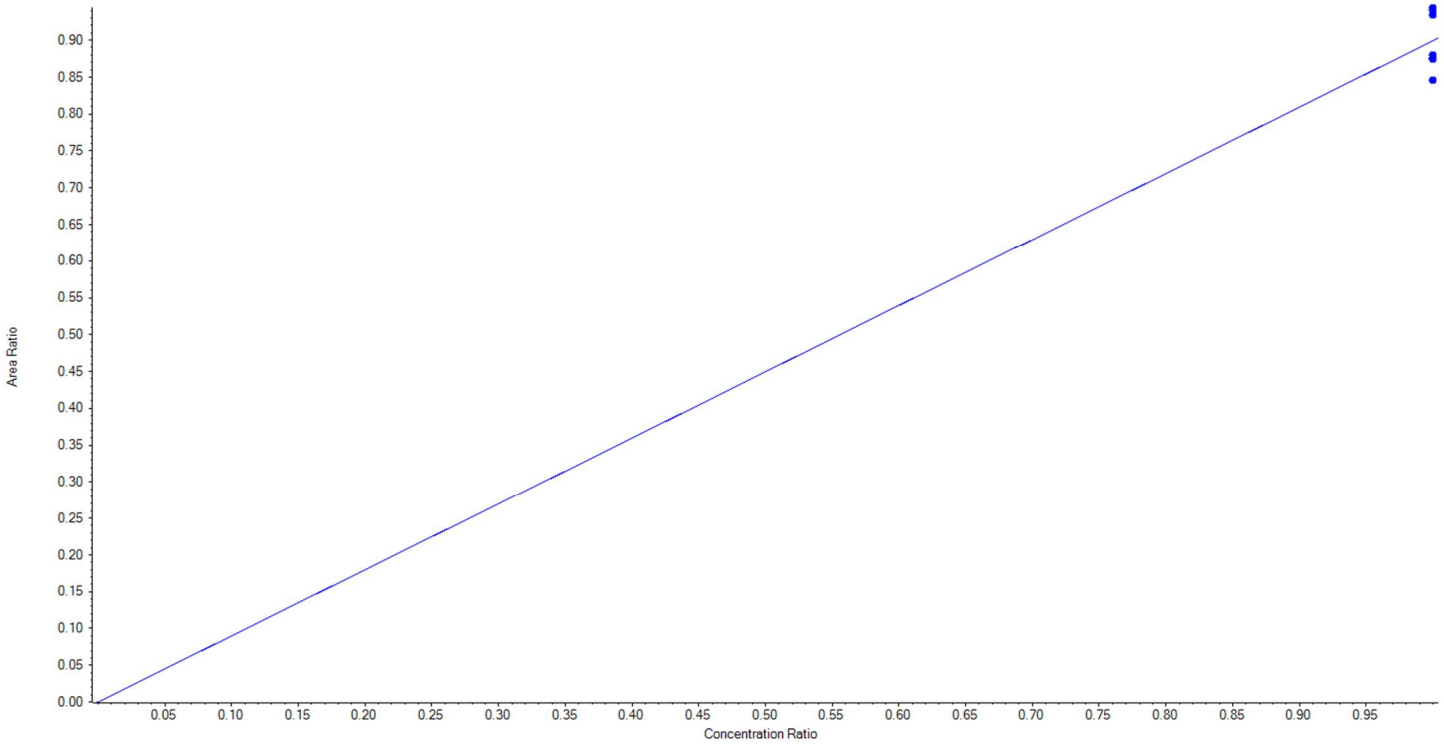
Calibration Summary Report

Created with Analyst Reporter
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Analyte Name	13C4-PFHpA	**Data File**	18-0601.wiff
MRM Transition	367.0 / 322.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.89917 x (std. dev. = 0.03960) (weighting: 1 / x)

Vial	Sample Name	Sample ID	Used for ICAL	Target Conc. (ng/L)	Calculated Conc. (ng/L)	Recovery (%)
2	KB73	L1	True	250.00	261.654960	104.7
3	KB74	L2	True	250.00	244.514684	97.8
4	KB75	L3	True	250.00	259.855420	103.9
5	KB76	L4	True	250.00	243.044007	97.2
6	KB77	L5	True	250.00	235.223263	94.1
7	KB78	L6	True	250.00	243.333341	97.3
8	KB79	L7	True	250.00	262.374325	105.0



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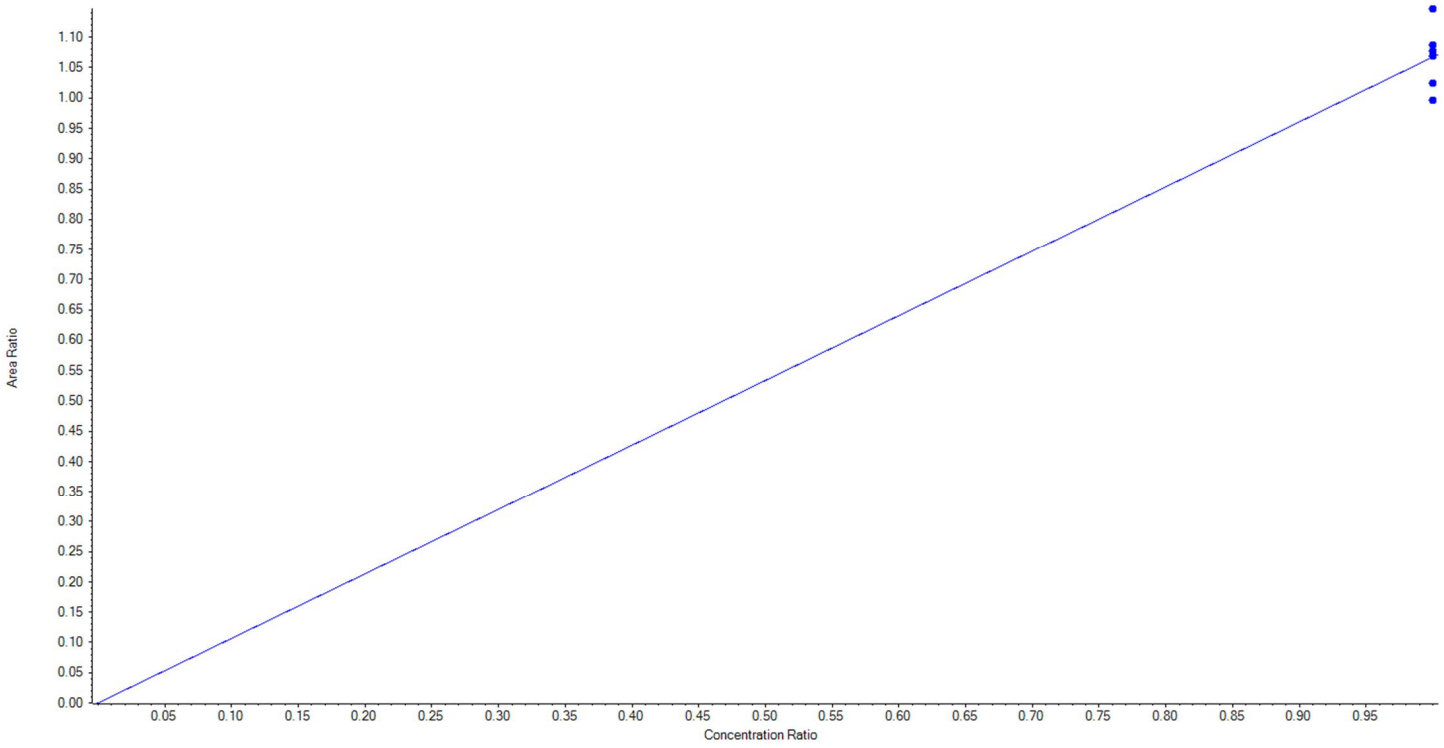
Calibration Summary Report

Created with Analyst Reporter
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Analyte Name	13C8-PFOA	**Data File**	18-0601.wiff
MRM Transition	421.0 / 376.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.06735 x (std. dev. = 0.04777) (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	239.840388	95.9
3	KB74	L2	True	250.00	252.420669	101.0
4	KB75	L3	True	250.00	254.787601	101.9
5	KB76	L4	True	250.00	268.555463	107.4
6	KB77	L5	True	250.00	250.486670	100.2
7	KB78	L6	True	250.00	233.431611	93.4
8	KB79	L7	True	250.00	250.477598	100.2



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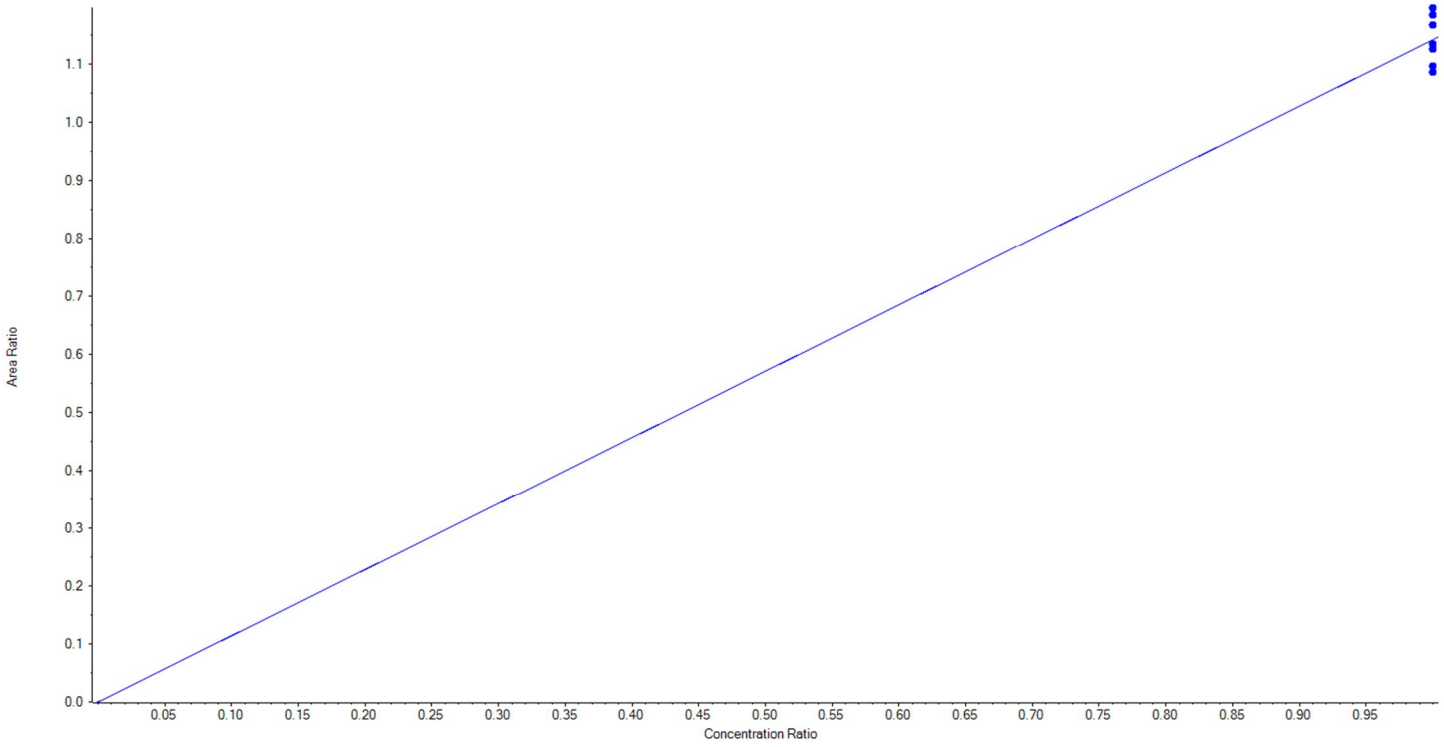
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/10/2018 1:54:34 PM

Analyte Name	13C9-PFNA	**Data File**	18-0601.wiff
MRM Transition	472.0 / 427.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C2-PFOA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.14250 x (std. dev. = 0.04286) (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	240.220252	96.1
3	KB74	L2	True	250.00	261.995376	104.8
4	KB75	L3	True	250.00	259.505207	103.8
5	KB76	L4	True	250.00	248.487072	99.4
6	KB77	L5	True	250.00	246.350816	98.5
7	KB78	L6	True	250.00	255.682528	102.3
8	KB79	L7	True	250.00	237.758750	95.1



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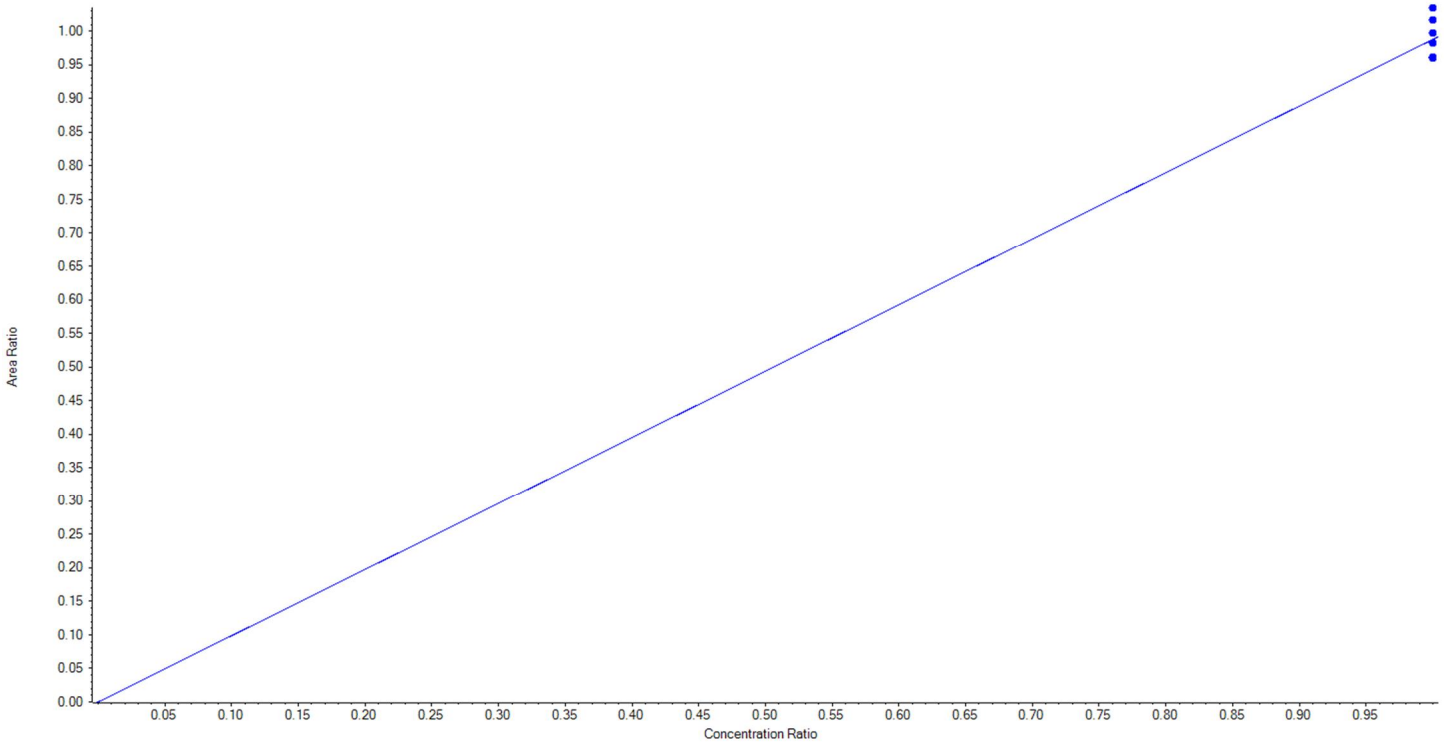
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/10/2018 1:54:34 PM

Analyte Name	13C6-PFDA	**Data File**	18-0601.wiff
MRM Transition	519.0 / 474.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.98773 x (std. dev. = 0.02988) (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	257.474350	103.0
3	KB74	L2	True	250.00	248.504308	99.4
4	KB75	L3	True	250.00	261.874670	104.8
5	KB76	L4	True	250.00	243.364521	97.4
6	KB77	L5	True	250.00	252.483885	101.0
7	KB78	L6	True	250.00	243.176304	97.3
8	KB79	L7	True	250.00	243.121962	97.3



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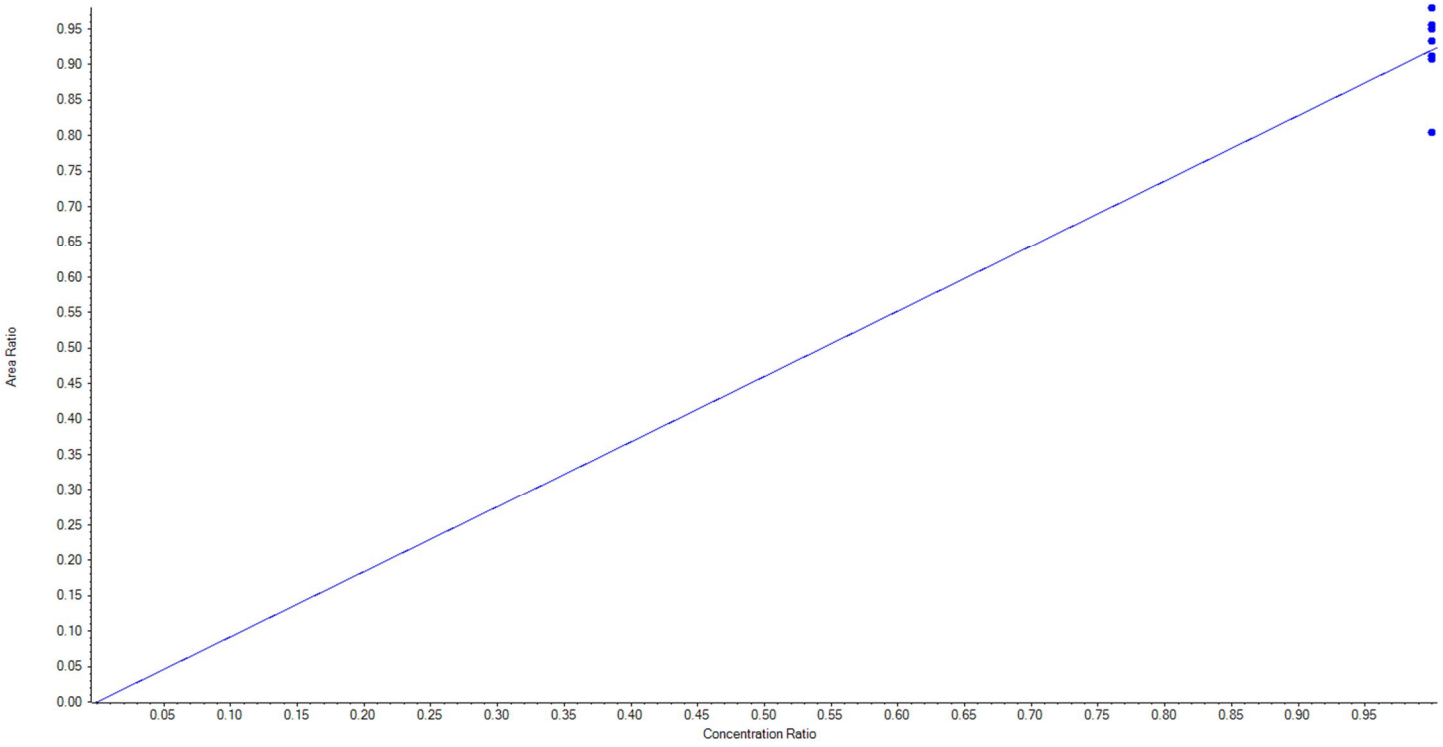
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/10/2018 1:54:34 PM

Analyte Name	13C7-PFUnA	**Data File**	18-0601.wiff
MRM Transition	570.0 / 525.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.92035 x (std. dev. = 0.05701) (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	259.403586	103.8
3	KB74	L2	True	250.00	266.113351	106.5
4	KB75	L3	True	250.00	253.532677	101.4
5	KB76	L4	True	250.00	247.793995	99.1
6	KB77	L5	True	250.00	246.488011	98.6
7	KB78	L6	True	250.00	258.198717	103.3
8	KB79	L7	True	250.00	218.469663	87.4



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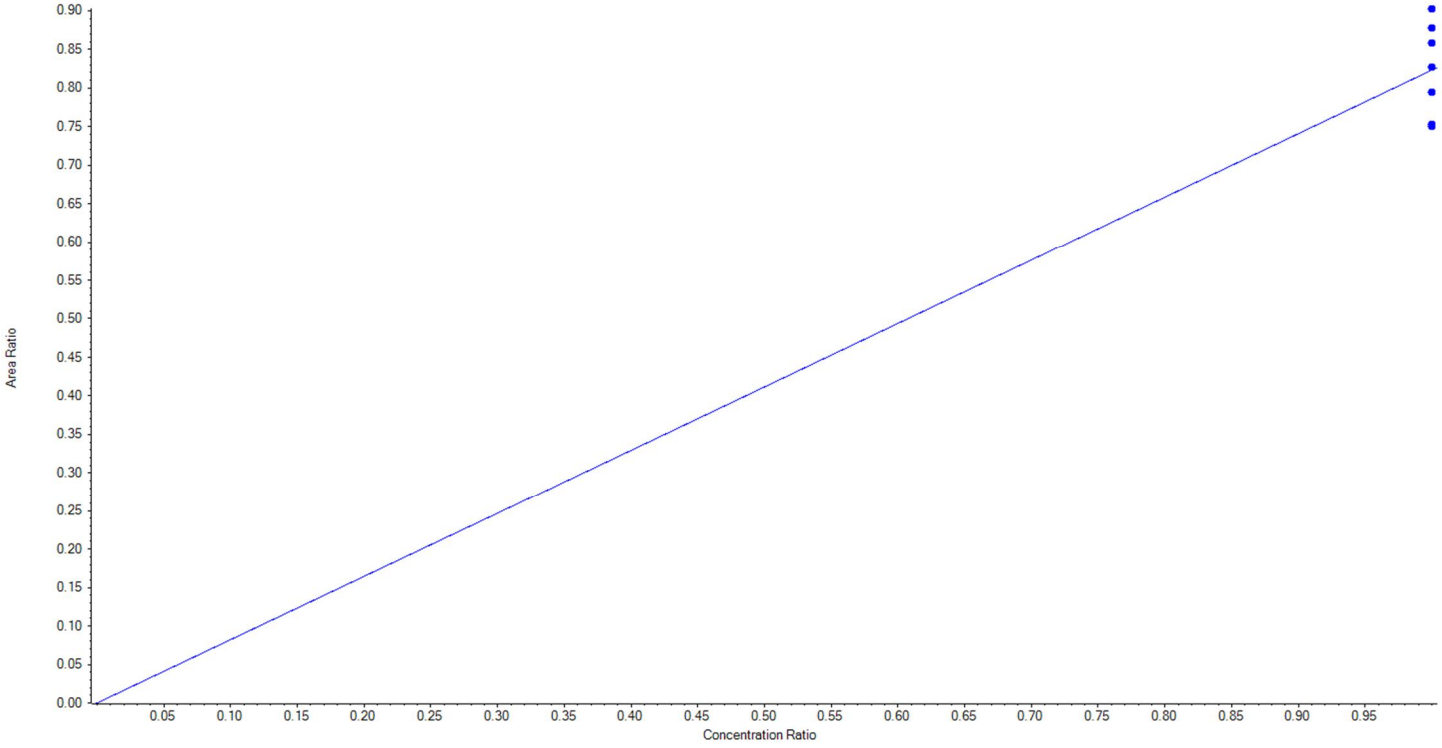
Calibration Summary Report

Created with Analyst Reporter
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Analyte Name	13C2-PFTeDA	**Data File**	18-0601.wiff
MRM Transition	715.0 / 670.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C2-PFDA	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.82314 x (std. dev. = 0.06022) (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	274.071997	109.6
3	KB74	L2	True	250.00	260.776024	104.3
4	KB75	L3	True	250.00	241.309248	96.5
5	KB76	L4	True	250.00	227.675736	91.1
6	KB77	L5	True	250.00	228.552747	91.4
7	KB78	L6	True	250.00	250.988736	100.4
8	KB79	L7	True	250.00	266.625511	106.7



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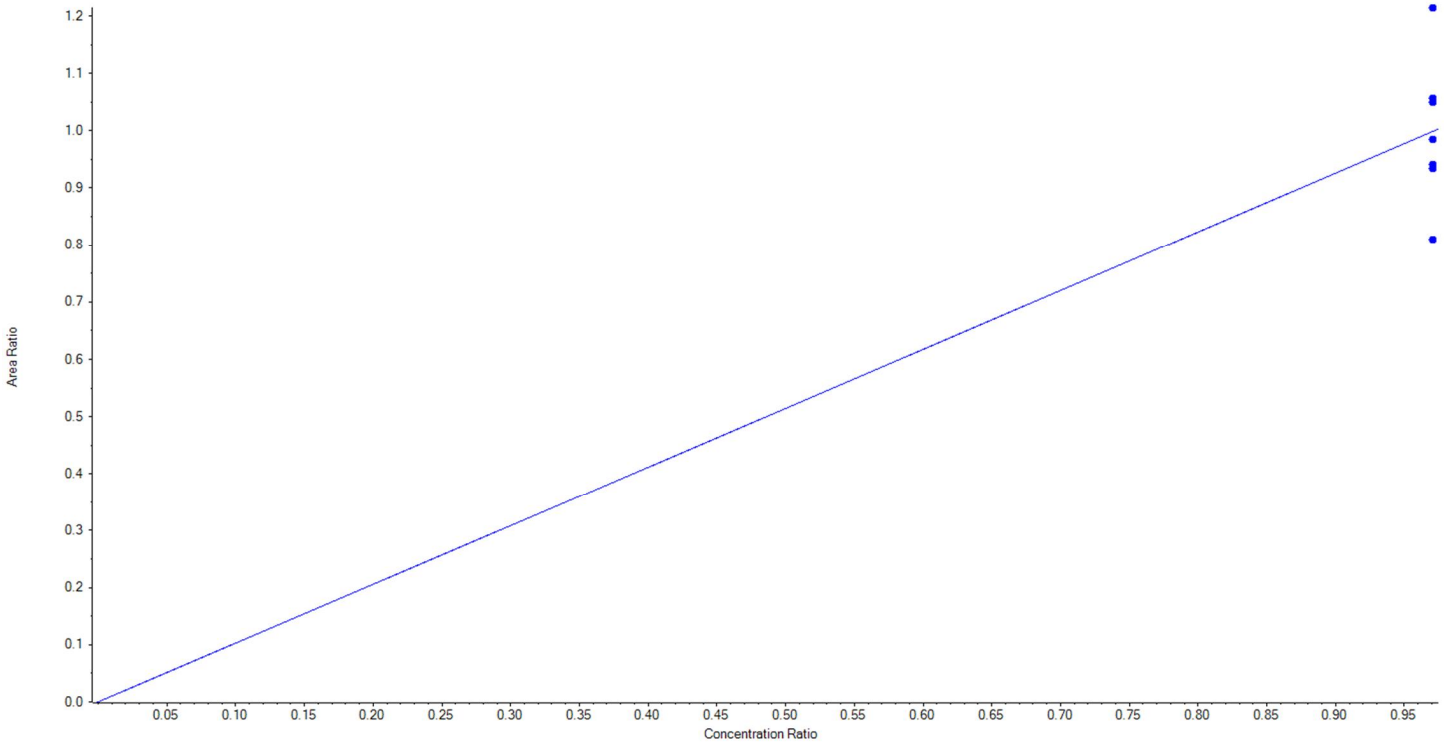
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/10/2018 1:54:34 PM

Analyte Name	13C3-PFBS	**Data File**	18-0601.wiff
MRM Transition	302.0 / 99.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 1.02890 x (std. dev. = 0.12985) (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	218.998363	94.3
3	KB74	L2	True	232.25	243.887307	105.0
4	KB75	L3	True	232.25	245.747673	105.8
5	KB76	L4	True	232.25	229.153269	98.7
6	KB77	L5	True	232.25	188.375930	81.1
7	KB78	L6	True	232.25	217.304120	93.6
8	KB79	L7	True	232.25	282.283339	121.5



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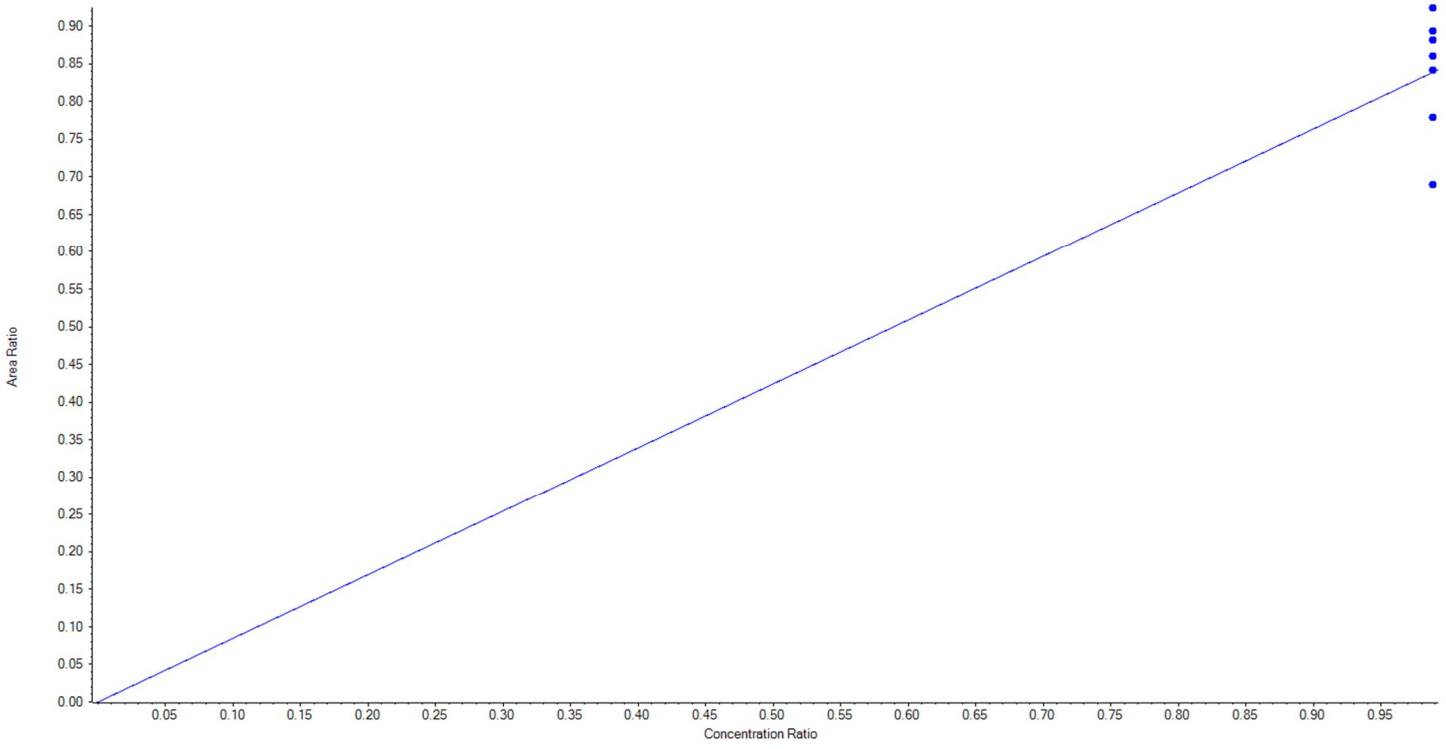
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/10/2018 1:54:34 PM

Analyte Name	13C3-PFHxS	**Data File**	18-0601.wiff
MRM Transition	402.0 / 99.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.84854 x (std. dev. = 0.08081) (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	242.607727	102.6
3	KB74	L2	True	236.50	237.440480	100.4
4	KB75	L3	True	236.50	260.613088	110.2
5	KB76	L4	True	236.50	219.602003	92.9
6	KB77	L5	True	236.50	248.421540	105.0
7	KB78	L6	True	236.50	194.653402	82.3
8	KB79	L7	True	236.50	252.161761	106.6



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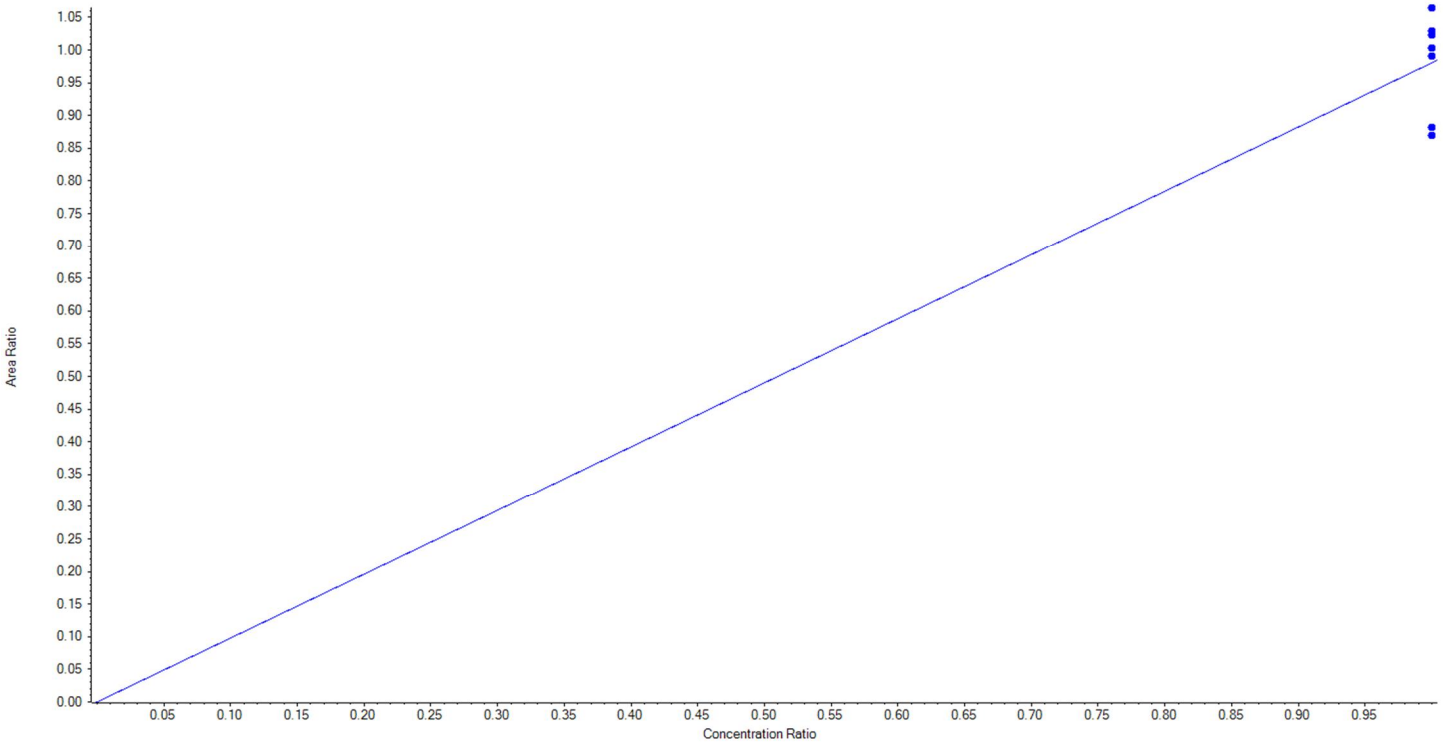
Calibration Summary Report

Created with Analyst Reporter
Printed: 09/10/2018 1:54:34 PM

Analyte Name	13C8-PFOS	**Data File**	18-0601.wiff
MRM Transition	507.0 / 99.0	**Result Table**	18-0581_18-0584_SIS
Internal Standard	13C4-PFOS	**Instrument Name**	QTRAP 5500
Acquisition Date	10/8/2018 3:29:19 PM	**Acquisition Method**	5-0369.dam

Regression Equation: y = 0.98055 x (std. dev. = 0.07487) (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	215.345517	90.0
3	KB74	L2	True	239.25	249.684087	104.4
4	KB75	L3	True	239.25	251.144046	105.0
5	KB76	L4	True	239.25	259.730476	108.6
6	KB77	L5	True	239.25	241.812244	101.1
7	KB78	L6	True	239.25	212.331758	88.8
8	KB79	L7	True	239.25	244.701872	102.3



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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	2018-10-08T15:40:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	1.57	40668.17	99.953426	147.8	false
PFBS_2	298.9 / 99.0	1.57	13084.98	99.537833	143.5	false
PFHxA_1	313.0 / 269.0	1.90	40708.11	92.447260	20.9	false
PFHxA_2	313.0 / 119.0	1.90	2578.15	99.213282	14.9	false
PFHpA_1	363.0 / 319.0	2.32	36189.71	89.873661	56.8	false
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.34	44435.47	100.517086	150.2	false
PFHxS_2	399.0 / 99.0	2.34	12734.39	95.954083	127.3	false
PFOA_1	413.0 / 369.0	2.73	46314.88	101.180654	75.1	false
PFOA_2	413.0 / 169.0	2.73	4177.08	123.895310	83.4	true
PFNA_1	463.0 / 419.0	3.14	50710.36	111.732664	115.9	false
PFNA_2	463.0 / 219.0	3.13	16248.01	124.667356	138.2	false
PFOS_1	499.0 / 80.0	3.14	65961.98	123.573097	71.4	false
PFOS_2	499.0 / 99.0	3.13	9677.50	106.379713	150.4	false
PFDA_1	513.0 / 469.0	3.50	56677.45	91.723499	128.0	false
PFDA_2	513.0 / 219.0	3.50	2858.19	99.266945	53.8	false
PFUnA_1	563.0 / 519.0	3.83	49946.70	116.714826	129.6	false
PFUnA_2	563.0 / 269.0	3.83	3273.00	112.803868	53.8	true
PFDoA_1	613.0 / 569.0	4.12	48332.16	87.034754	207.5	false
PFDoA_2	613.0 / 319.0	4.12	8192.67	89.771190	136.4	false
PFTrDA_1	663.0 / 619.0	4.37	39977.81	89.252137	267.4	false
PFTrDA_2	663.0 / 169.0	4.37	3025.44	91.358244	134.0	false
PFTeDA_1	713.0 / 669.0	4.59	48383.63	81.664418	542.3	false
PFTeDA_2	713.0 / 169.0	4.59	2519.85	85.351718	234.0	false
NMeFOSAA_1	570.0 / 419.0	3.66	8441.75	97.702606	292.9	false
NMeFOSAA_2	570.0 / 512.0	3.65	3931.68	88.881031	112.5	false
NEtFOSAA_1	584.0 / 419.0	3.82	6727.50	111.213907	204.9	false
NEtFOSAA_2	584.0 / 483.0	3.82	515.03	113.055246	37.2	false

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Summary Quant Report

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Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T15:51:02	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	97996.21	235.867817	288.2	false
PFBS_2	298.9 / 99.0	1.56	30342.08	237.336670	285.2	false
PFHxA_1	313.0 / 269.0	1.89	92276.60	287.493278	36.0	false
PFHxA_2	313.0 / 119.0	1.89	5694.80	256.972963	30.8	false
PFHpA_1	363.0 / 319.0	2.31	90146.68	297.117006	116.2	false
PFHpA_2	363.0 / 169.0	2.29	1692.78	239.925260	51.9	false
PFHxS_1	399.0 / 80.0	2.33	108182.30	266.028024	169.8	false
PFHxS_2	399.0 / 99.0	2.33	31239.67	267.441050	214.4	false
PFOA_1	413.0 / 369.0	2.73	111798.84	271.138088	144.4	false
PFOA_2	413.0 / 169.0	2.72	7229.09	243.598034	92.7	false
PFNA_1	463.0 / 419.0	3.13	112088.23	265.554817	182.8	false
PFNA_2	463.0 / 219.0	3.13	30549.71	238.006617	190.8	false
PFOS_1	499.0 / 80.0	3.12	137244.09	231.385263	102.7	false
PFOS_2	499.0 / 99.0	3.12	25802.49	253.914073	281.2	false
PFDA_1	513.0 / 469.0	3.49	133394.41	283.577861	235.3	false
PFDA_2	513.0 / 219.0	3.49	5884.08	274.959074	89.4	false
PFUnA_1	563.0 / 519.0	3.82	115591.07	257.976381	169.9	false
PFUnA_2	563.0 / 269.0	3.82	6763.47	261.313717	102.8	false
PFDoA_1	613.0 / 569.0	4.11	116544.25	263.602074	253.9	false
PFDoA_2	613.0 / 319.0	4.10	18423.85	258.318969	187.8	false
PFTrDA_1	663.0 / 619.0	4.36	96393.82	249.241065	391.9	false
PFTrDA_2	663.0 / 169.0	4.36	6271.21	234.431195	186.7	false
PFTeDA_1	713.0 / 669.0	4.58	117526.52	253.892322	745.6	false
PFTeDA_2	713.0 / 169.0	4.58	5838.46	256.536093	412.9	false
NMeFOSAA_1	570.0 / 419.0	3.65	17494.23	270.300837	399.5	false
NMeFOSAA_2	570.0 / 512.0	3.65	10257.55	298.534462	179.0	false
NEtFOSAA_1	584.0 / 419.0	3.81	18232.38	243.571968	926.7	false
NEtFOSAA_2	584.0 / 483.0	3.80	985.11	192.274109	81.6	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	2018-10-08T16:01:53	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	171907.26	467.701721	301.1	false
PFBS_2	298.9 / 99.0	1.56	51879.22	467.679320	332.5	false
PFHxA_1	313.0 / 269.0	1.89	143175.15	488.979798	50.7	false
PFHxA_2	313.0 / 119.0	1.89	10476.06	506.830897	42.8	false
PFHpA_1	363.0 / 319.0	2.30	136165.60	476.968535	137.7	false
PFHpA_2	363.0 / 169.0	2.30	3203.78	532.066103	116.1	false
PFHxS_1	399.0 / 80.0	2.33	182161.08	454.394152	182.7	false
PFHxS_2	399.0 / 99.0	2.33	51732.75	453.657269	286.9	false
PFOA_1	413.0 / 369.0	2.72	178307.00	487.237867	191.6	false
PFOA_2	413.0 / 169.0	2.72	11301.33	454.441982	138.8	false
PFNA_1	463.0 / 419.0	3.12	168981.24	464.587264	221.6	false
PFNA_2	463.0 / 219.0	3.12	49042.28	445.274904	292.9	false
PFOS_1	499.0 / 80.0	3.12	263724.73	490.927213	152.4	false
PFOS_2	499.0 / 99.0	3.12	46469.02	499.305152	389.4	false
PFDA_1	513.0 / 469.0	3.48	202554.80	458.611120	261.3	false
PFDA_2	513.0 / 219.0	3.48	9291.81	475.811514	206.2	false
PFUnA_1	563.0 / 519.0	3.81	194658.75	486.390999	202.1	false
PFUnA_2	563.0 / 269.0	3.81	11024.85	510.984846	135.6	false
PFDoA_1	613.0 / 569.0	4.10	185364.70	494.809950	304.3	false
PFDoA_2	613.0 / 319.0	4.10	29281.72	490.819808	248.1	false
PFTrDA_1	663.0 / 619.0	4.35	161653.00	498.194197	489.0	false
PFTrDA_2	663.0 / 169.0	4.35	11309.19	526.023755	288.0	false
PFTeDA_1	713.0 / 669.0	4.57	191505.25	504.637939	928.4	false
PFTeDA_2	713.0 / 169.0	4.57	9174.84	494.590376	439.8	false
NMeFOSAA_1	570.0 / 419.0	3.64	30888.76	474.866395	350.3	false
NMeFOSAA_2	570.0 / 512.0	3.64	16836.11	476.944765	344.8	false
NEtFOSAA_1	584.0 / 419.0	3.81	32032.95	459.435665	453.1	false
NEtFOSAA_2	584.0 / 483.0	3.81	2351.88	523.159531	104.3	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	2018-10-08T16:12:44	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	392417.32	993.462503	465.8	false
PFBS_2	298.9 / 99.0	1.56	114842.33	974.004845	429.3	false
PFHxA_1	313.0 / 269.0	1.88	281812.65	983.021914	74.2	false
PFHxA_2	313.0 / 119.0	1.88	21929.54	1054.871534	64.1	false
PFHpA_1	363.0 / 319.0	2.30	279387.48	980.539024	187.5	false
PFHpA_2	363.0 / 169.0	2.30	6285.62	1074.132757	167.0	false
PFHxS_1	399.0 / 80.0	2.32	415537.83	1088.436384	274.9	false
PFHxS_2	399.0 / 99.0	2.32	119381.60	1109.381232	500.8	false
PFOA_1	413.0 / 369.0	2.72	387779.81	935.786687	266.2	false
PFOA_2	413.0 / 169.0	2.71	25120.59	926.390958	236.2	false
PFNA_1	463.0 / 419.0	3.12	362146.83	981.108634	347.5	false
PFNA_2	463.0 / 219.0	3.12	113257.38	1012.445509	383.5	false
PFOS_1	499.0 / 80.0	3.12	577124.73	904.657366	225.1	false
PFOS_2	499.0 / 99.0	3.12	104306.14	940.173706	535.1	false
PFDA_1	513.0 / 469.0	3.48	439108.27	1003.320169	444.3	false
PFDA_2	513.0 / 219.0	3.48	19088.80	998.656796	233.0	false
PFUnA_1	563.0 / 519.0	3.81	397197.56	903.715490	282.0	false
PFUnA_2	563.0 / 269.0	3.81	21879.16	956.967861	207.3	false
PFDoA_1	613.0 / 569.0	4.09	425373.61	1051.603118	366.5	false
PFDoA_2	613.0 / 319.0	4.09	66825.71	1045.219534	379.7	false
PFTrDA_1	663.0 / 619.0	4.35	347190.32	1027.562136	544.6	false
PFTrDA_2	663.0 / 169.0	4.34	21976.91	992.847328	342.4	false
PFTeDA_1	713.0 / 669.0	4.57	412325.02	1058.184635	1187.6	false
PFTeDA_2	713.0 / 169.0	4.57	19886.40	1051.091061	629.0	false
NMeFOSAA_1	570.0 / 419.0	3.63	69641.09	1084.703812	668.8	false
NMeFOSAA_2	570.0 / 512.0	3.63	35807.08	1013.211747	532.9	false
NEtFOSAA_1	584.0 / 419.0	3.80	68087.88	949.960545	438.5	false
NEtFOSAA_2	584.0 / 483.0	3.80	4957.69	1098.825316	311.4	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	2018-10-08T16:23:36	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	756343.61	2947.537177	722.3	false
PFBS_2	298.9 / 99.0	1.56	229596.11	3021.038298	484.8	false
PFHxA_1	313.0 / 269.0	1.89	572181.89	2463.536173	131.9	false
PFHxA_2	313.0 / 119.0	1.88	40903.69	2382.338955	107.0	false
PFHpA_1	363.0 / 319.0	2.30	533838.60	2380.403957	257.5	false
PFHpA_2	363.0 / 169.0	2.30	9815.51	2156.057878	259.7	false
PFHxS_1	399.0 / 80.0	2.32	788727.82	2372.812761	437.1	false
PFHxS_2	399.0 / 99.0	2.32	226527.85	2425.801995	875.6	false
PFOA_1	413.0 / 369.0	2.71	757753.26	2409.578897	384.6	false
PFOA_2	413.0 / 169.0	2.71	46543.22	2309.165462	385.4	false
PFNA_1	463.0 / 419.0	3.12	694412.93	2339.025833	473.2	false
PFNA_2	463.0 / 219.0	3.12	204941.92	2267.641827	579.2	false
PFOS_1	499.0 / 80.0	3.11	1089935.72	2369.050851	313.3	false
PFOS_2	499.0 / 99.0	3.11	195598.56	2437.291957	610.4	false
PFDA_1	513.0 / 469.0	3.47	834944.35	2495.696626	635.8	false
PFDA_2	513.0 / 219.0	3.47	33509.30	2311.427685	379.1	false
PFUnA_1	563.0 / 519.0	3.80	778458.14	2353.654032	384.6	false
PFUnA_2	563.0 / 269.0	3.80	36059.02	2144.779953	259.2	false
PFDoA_1	613.0 / 569.0	4.09	784595.24	2534.867851	580.7	false
PFDoA_2	613.0 / 319.0	4.09	125267.75	2572.032131	438.1	false
PFTrDA_1	663.0 / 619.0	4.34	684475.10	2693.991009	702.5	false
PFTrDA_2	663.0 / 169.0	4.34	44906.01	2730.161506	447.7	false
PFTeDA_1	713.0 / 669.0	4.56	789907.61	2716.333041	1269.0	false
PFTeDA_2	713.0 / 169.0	4.56	38004.64	2700.584305	780.9	false
NMeFOSAA_1	570.0 / 419.0	3.63	128326.96	2361.513725	950.3	false
NMeFOSAA_2	570.0 / 512.0	3.63	73652.55	2451.833697	536.3	false
NEtFOSAA_1	584.0 / 419.0	3.79	133266.13	2415.081451	712.6	false
NEtFOSAA_2	584.0 / 483.0	3.79	7641.53	2227.146413	205.4	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	2018-10-08T16:34:28	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	3309537.55	10433.295836	1365.3	false
PFBS_2	298.9 / 99.0	1.56	961276.85	10256.020604	971.4	false
PFHxA_1	313.0 / 269.0	1.88	2290886.18	10605.144570	280.9	false
PFHxA_2	313.0 / 119.0	1.88	163941.16	10176.855980	204.5	false
PFHpA_1	363.0 / 319.0	2.29	2292450.94	10398.055976	612.0	false
PFHpA_2	363.0 / 169.0	2.30	46477.71	10544.398899	508.1	false
PFHxS_1	399.0 / 80.0	2.32	3129906.71	10676.033528	930.1	false
PFHxS_2	399.0 / 99.0	2.32	882021.93	10732.303596	1438.9	false
PFOA_1	413.0 / 369.0	2.71	2913238.82	10445.864678	1096.9	false
PFOA_2	413.0 / 169.0	2.71	181245.05	10261.764977	647.3	false
PFNA_1	463.0 / 419.0	3.11	2720387.13	9303.221102	966.4	false
PFNA_2	463.0 / 219.0	3.11	852122.98	9562.994751	1180.8	false
PFOS_1	499.0 / 80.0	3.11	4455199.63	9861.510766	665.9	false
PFOS_2	499.0 / 99.0	3.11	791057.49	10023.980246	1044.1	false
PFDA_1	513.0 / 469.0	3.47	3198907.75	10575.579483	975.2	false
PFDA_2	513.0 / 219.0	3.47	136125.45	10462.989195	788.2	false
PFUnA_1	563.0 / 519.0	3.80	3109989.08	9428.194009	562.4	false
PFUnA_2	563.0 / 269.0	3.80	155760.48	9433.988662	492.3	false
PFDoA_1	613.0 / 569.0	4.08	3204233.06	10483.397789	786.3	false
PFDoA_2	613.0 / 319.0	4.08	497945.51	10372.966024	650.8	false
PFTrDA_1	663.0 / 619.0	4.33	2747027.59	10387.589354	1150.5	false
PFTrDA_2	663.0 / 169.0	4.33	178230.86	10459.488900	774.7	false
PFTeDA_1	713.0 / 669.0	4.55	3177876.84	10540.568356	1582.6	false
PFTeDA_2	713.0 / 169.0	4.55	149100.21	10234.811734	1651.1	false
NMeFOSAA_1	570.0 / 419.0	3.63	513232.73	9193.657335	1376.7	false
NMeFOSAA_2	570.0 / 512.0	3.63	290086.69	9363.747452	1330.8	false
NEtFOSAA_1	584.0 / 419.0	3.79	517713.39	11403.435561	895.5	false
NEtFOSAA_2	584.0 / 483.0	3.79	31066.33	11091.423822	930.3	false

BATTELLE

Summary Quant Report

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:45:19	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	7690612.17	19515.681521	2487.0	false
PFBS_2	298.9 / 99.0	1.55	2285398.39	19637.882430	2030.9	false
PFHxA_1	313.0 / 269.0	1.88	5078652.41	19772.877006	407.0	false
PFHxA_2	313.0 / 119.0	1.88	387675.85	20216.416389	295.4	false
PFHpA_1	363.0 / 319.0	2.29	4908679.61	19727.041841	663.8	false
PFHpA_2	363.0 / 169.0	2.29	97863.45	19703.419103	503.1	false
PFHxS_1	399.0 / 80.0	2.32	6831890.68	19735.278066	908.8	false
PFHxS_2	399.0 / 99.0	2.32	1902351.60	19608.960774	1148.6	false
PFOA_1	413.0 / 369.0	2.71	6171753.73	19699.213129	1411.7	false
PFOA_2	413.0 / 169.0	2.71	396748.07	20030.743277	954.8	false
PFNA_1	463.0 / 419.0	3.11	5939423.06	20884.769686	1255.6	false
PFNA_2	463.0 / 219.0	3.11	1794567.23	20698.969036	1791.3	false
PFOS_1	499.0 / 80.0	3.11	9852630.87	20368.895445	742.6	false
PFOS_2	499.0 / 99.0	3.11	1697806.01	20088.955153	1044.1	false
PFDA_1	513.0 / 469.0	3.47	6562338.44	19441.491242	995.5	false
PFDA_2	513.0 / 219.0	3.47	286146.26	19726.888792	653.9	false
PFUnA_1	563.0 / 519.0	3.79	6493292.23	20803.354263	810.7	false
PFUnA_2	563.0 / 269.0	3.79	326164.90	20929.161092	742.7	false
PFDoA_1	613.0 / 569.0	4.08	6617095.38	19434.684463	842.5	false
PFDoA_2	613.0 / 319.0	4.08	1043464.33	19520.872343	761.9	false
PFTrDA_1	663.0 / 619.0	4.33	6091889.04	19404.170102	1200.2	false
PFTrDA_2	663.0 / 169.0	4.33	390446.23	19315.689073	925.3	false
PFTeDA_1	713.0 / 669.0	4.55	6866121.41	19194.719288	1825.6	false
PFTeDA_2	713.0 / 169.0	4.55	337374.63	19527.034713	1538.9	false
NMeFOSAA_1	570.0 / 419.0	3.62	1170736.88	20867.255290	1682.0	false
NMeFOSAA_2	570.0 / 512.0	3.62	643631.01	20656.846846	1056.0	false
NEtFOSAA_1	584.0 / 419.0	3.79	1066986.38	18767.300903	958.7	false
NEtFOSAA_2	584.0 / 483.0	3.79	66953.76	19104.115563	704.8	false

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Summary Quant Report

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Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T15:40:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.11	104536.27	261.067103	1717.3	false
d3-MeFOSAA	573.0 / 419.0	3.65	16095.60	265.038957	211.7	false
d5-EtFOSAA	589.0 / 419.0	3.81	16463.25	250.047206	179.8	false
13C5-PFHxA	318.0 / 273.0	1.89	69346.03	252.344194	714.9	false
13C4-PFHpA	367.0 / 322.0	2.30	81490.43	261.654960	1166.6	false
13C8-PFOA	421.0 / 376.0	2.72	88667.45	239.840388	1034.7	false
13C9-PFNA	472.0 / 427.0	3.12	95060.67	240.220252	1731.7	false
13C6-PFDA	519.0 / 474.0	3.49	102747.84	257.474350	929.1	false
13C7-PFUnA	570.0 / 525.0	3.81	96456.00	259.403586	1628.4	false
13C2-PFTeDA	715.0 / 670.0	4.59	91146.52	274.071997	2801.4	false
13C3-PFBS	302.0 / 99.0	1.55	28430.62	218.998363	480.7	false
13C3-PFHxS	402.0 / 99.0	2.33	25974.65	242.607727	332.9	false
13C8-PFOS	507.0 / 99.0	3.12	26642.75	215.345517	284.9	false

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Summary Quant Report

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Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T15:51:02	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.09	105895.90	251.483375	816.1	true
d3-MeFOSAA	573.0 / 419.0	3.64	13900.17	229.387671	167.0	false
d5-EtFOSAA	589.0 / 419.0	3.80	18818.40	286.441908	190.4	false
13C5-PFHxA	318.0 / 273.0	1.88	68053.92	244.342821	612.1	false
13C4-PFHpA	367.0 / 322.0	2.30	77180.54	244.514684	488.6	false
13C8-PFOA	421.0 / 376.0	2.71	94578.42	252.420669	8620.6	false
13C9-PFNA	472.0 / 427.0	3.11	105077.59	261.995376	1974.0	false
13C6-PFDA	519.0 / 474.0	3.48	104286.39	248.504308	1081.5	false
13C7-PFUnA	570.0 / 525.0	3.80	104057.87	266.113351	871.6	false
13C2-PFTeDA	715.0 / 670.0	4.57	91200.68	260.776024	2411.4	false
13C3-PFBS	302.0 / 99.0	1.55	31592.73	243.887307	654.2	false
13C3-PFHxS	402.0 / 99.0	2.32	25366.03	237.440480	295.5	false
13C8-PFOS	507.0 / 99.0	3.11	30823.83	249.684087	228.9	false

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Summary Quant Report

Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:01:53	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.09	95733.32	239.647507	911.6	false
d3-MeFOSAA	573.0 / 419.0	3.63	14542.46	264.549518	206.2	false
d5-EtFOSAA	589.0 / 419.0	3.80	17583.69	295.041431	194.2	false
13C5-PFHxA	318.0 / 273.0	1.88	66586.02	258.675787	678.7	false
13C4-PFHpA	367.0 / 322.0	2.29	75806.83	259.855420	1105.2	false
13C8-PFOA	421.0 / 376.0	2.71	88230.59	254.787601	137658.2	false
13C9-PFNA	472.0 / 427.0	3.11	96191.41	259.505207	7958.5	false
13C6-PFDA	519.0 / 474.0	3.47	104257.56	261.874670	954.5	false
13C7-PFUnA	570.0 / 525.0	3.80	94050.81	253.532677	6774.4	false
13C2-PFTeDA	715.0 / 670.0	4.57	80061.69	241.309248	2029.3	false
13C3-PFBS	302.0 / 99.0	1.54	28878.08	245.747673	519.6	false
13C3-PFHxS	402.0 / 99.0	2.32	25256.59	260.613088	337.1	false
13C8-PFOS	507.0 / 99.0	3.10	28125.45	251.144046	212.5	false

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Summary Quant Report

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Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:12:44	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.08	107722.17	238.494454	714.2	false
d3-MeFOSAA	573.0 / 419.0	3.63	15762.60	244.355224	192.0	false
d5-EtFOSAA	589.0 / 419.0	3.79	17508.23	250.345681	188.5	false
13C5-PFHxA	318.0 / 273.0	1.87	68771.23	241.044127	615.5	false
13C4-PFHpA	367.0 / 322.0	2.29	78585.87	243.044007	629.1	false
13C8-PFOA	421.0 / 376.0	2.71	103076.07	268.555463	1327.1	false
13C9-PFNA	472.0 / 427.0	3.10	102088.54	248.487072	928.8	false
13C6-PFDA	519.0 / 474.0	3.46	109548.88	243.364521	1129.8	false
13C7-PFUnA	570.0 / 525.0	3.79	103933.61	247.793995	1019.7	false
13C2-PFTeDA	715.0 / 670.0	4.56	85409.10	227.675736	2061.4	false
13C3-PFBS	302.0 / 99.0	1.54	31599.49	229.153269	493.4	false
13C3-PFHxS	402.0 / 99.0	2.31	24974.11	219.602003	483.9	false
13C8-PFOS	507.0 / 99.0	3.10	34133.02	259.730476	262.4	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	2018-10-08T16:23:36	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	84273.58	245.526180	596.9	false
d3-MeFOSAA	573.0 / 419.0	3.62	12782.65	248.061714	146.3	false
d5-EtFOSAA	589.0 / 419.0	3.79	13181.55	235.944297	180.8	false
13C5-PFHxA	318.0 / 273.0	1.87	57596.77	242.891692	672.3	false
13C4-PFHpA	367.0 / 322.0	2.29	63214.26	235.223263	705.9	false
13C8-PFOA	421.0 / 376.0	2.70	79906.80	250.486670	1202.4	false
13C9-PFNA	472.0 / 427.0	3.10	84120.62	246.350816	963.3	false
13C6-PFDA	519.0 / 474.0	3.46	86367.67	252.483885	979.7	false
13C7-PFUnA	570.0 / 525.0	3.78	78564.77	246.488011	537.6	false
13C2-PFTeDA	715.0 / 670.0	4.55	65153.94	228.552747	1724.7	false
13C3-PFBS	302.0 / 99.0	1.54	20750.77	188.375930	462.7	false
13C3-PFHxS	402.0 / 99.0	2.31	22568.25	248.421540	385.9	false
13C8-PFOS	507.0 / 99.0	3.10	25385.45	241.812244	254.0	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	2018-10-08T16:34:28	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	84232.72	257.211777	760.4	false
d3-MeFOSAA	573.0 / 419.0	3.62	13036.87	235.150088	129.5	false
d5-EtFOSAA	589.0 / 419.0	3.78	10988.98	182.824015	138.8	false
13C5-PFHxA	318.0 / 273.0	1.87	54506.11	239.001083	525.2	false
13C4-PFHpA	367.0 / 322.0	2.28	62892.13	243.333341	492.6	false
13C8-PFOA	421.0 / 376.0	2.70	71617.41	233.431611	1556.9	false
13C9-PFNA	472.0 / 427.0	3.10	83967.14	255.682528	943.2	false
13C6-PFDA	519.0 / 474.0	3.46	79366.11	243.176304	603.3	false
13C7-PFUnA	570.0 / 525.0	3.78	78520.40	258.198717	558.1	false
13C2-PFTeDA	715.0 / 670.0	4.55	68266.05	250.988736	1954.8	false
13C3-PFBS	302.0 / 99.0	1.54	25753.96	217.304120	502.5	false
13C3-PFHxS	402.0 / 99.0	2.31	19025.58	194.653402	276.3	false
13C8-PFOS	507.0 / 99.0	3.09	23982.19	212.331758	223.4	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	2018-10-08T16:45:19	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	93999.68	256.569603	795.3	false
d3-MeFOSAA	573.0 / 419.0	3.61	13978.75	263.456828	108.9	false
d5-EtFOSAA	589.0 / 419.0	3.78	14344.12	249.355462	160.6	false
13C5-PFHxA	318.0 / 273.0	1.87	64968.77	271.700296	803.4	false
13C4-PFHpA	367.0 / 322.0	2.28	71102.55	262.374325	493.2	false
13C8-PFOA	421.0 / 376.0	2.70	80574.39	250.477598	629.3	false
13C9-PFNA	472.0 / 427.0	3.10	81867.96	237.758750	846.7	false
13C6-PFDA	519.0 / 474.0	3.45	88770.62	243.121962	978.4	false
13C7-PFUnA	570.0 / 525.0	3.78	74327.70	218.469663	820.0	false
13C2-PFTeDA	715.0 / 670.0	4.54	81130.37	266.625511	1811.9	false
13C3-PFBS	302.0 / 99.0	1.54	32017.85	282.283339	501.8	false
13C3-PFHxS	402.0 / 99.0	2.30	23587.71	252.161761	291.7	false
13C8-PFOS	507.0 / 99.0	3.09	26450.99	244.701872	193.6	false

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Summary Ion Ratio Report

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Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T15:40:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.57	PFBS			
PFBS_2	298.9 / 99.0	1.57	PFBS	0.320	0.302	ü
PFHxA_1	313.0 / 269.0	1.90	PFHxA			
PFHxA_2	313.0 / 119.0	1.90	PFHxA	0.060	0.071	ü
PFHpA_1	363.0 / 319.0	2.32	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	
PFHxS_1	399.0 / 80.0	2.34	PFHxS			
PFHxS_2	399.0 / 99.0	2.34	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.73	PFOA			
PFOA_2	413.0 / 169.0	2.73	PFOA	0.090	0.067	ü
PFNA_1	463.0 / 419.0	3.14	PFNA			
PFNA_2	463.0 / 219.0	3.13	PFNA	0.320	0.301	ü
PFOS_1	499.0 / 80.0	3.14	PFOS			
PFOS_2	499.0 / 99.0	3.13	PFOS	0.150	0.174	ü
PFDA_1	513.0 / 469.0	3.50	PFDA			
PFDA_2	513.0 / 219.0	3.50	PFDA	0.050	0.044	ü
PFUnA_1	563.0 / 519.0	3.83	PFUnA			
PFUnA_2	563.0 / 269.0	3.83	PFUnA	0.070	0.055	ü
PFDoA_1	613.0 / 569.0	4.12	PFDoA			
PFDoA_2	613.0 / 319.0	4.12	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.37	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.37	PFTrDA	0.080	0.067	ü
PFTeDA_1	713.0 / 669.0	4.59	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.59	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.66	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.65	NMeFOSAA	0.470	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.82	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.82	NEtFOSAA	0.080	0.065	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	2018-10-08T15:51:02	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.310	0.302	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.060	0.071	ü
PFHpA_1	363.0 / 319.0	2.31	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.73	PFOA			
PFOA_2	413.0 / 169.0	2.72	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.13	PFNA			
PFNA_2	463.0 / 219.0	3.13	PFNA	0.270	0.301	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	3.12	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.49	PFDA			
PFDA_2	513.0 / 219.0	3.49	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.82	PFUnA			
PFUnA_2	563.0 / 269.0	3.82	PFUnA	0.060	0.055	ü
PFDoA_1	613.0 / 569.0	4.11	PFDoA			
PFDoA_2	613.0 / 319.0	4.10	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.36	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.36	PFTrDA	0.070	0.067	ü
PFTeDA_1	713.0 / 669.0	4.58	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.58	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.65	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.65	NMeFOSAA	0.590	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.81	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.80	NEtFOSAA	0.050	0.065	ü

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Summary Ion Ratio Report

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Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:01:53	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.89	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.33	PFHxS			
PFHxS_2	399.0 / 99.0	2.33	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.72	PFOA			
PFOA_2	413.0 / 169.0	2.72	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.12	PFNA			
PFNA_2	463.0 / 219.0	3.12	PFNA	0.290	0.301	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	3.12	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.48	PFDA			
PFDA_2	513.0 / 219.0	3.48	PFDA	0.050	0.044	ü
PFUnA_1	563.0 / 519.0	3.81	PFUnA			
PFUnA_2	563.0 / 269.0	3.81	PFUnA	0.060	0.055	ü
PFDoA_1	613.0 / 569.0	4.10	PFDoA			
PFDoA_2	613.0 / 319.0	4.10	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.35	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.35	PFTrDA	0.070	0.067	ü
PFTeDA_1	713.0 / 669.0	4.57	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.57	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.64	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.64	NMeFOSAA	0.550	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.81	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.81	NEtFOSAA	0.070	0.065	ü

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Summary Ion Ratio Report

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Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:12:44	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.290	0.302	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.080	0.071	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.72	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.12	PFNA			
PFNA_2	463.0 / 219.0	3.12	PFNA	0.310	0.301	ü
PFOS_1	499.0 / 80.0	3.12	PFOS			
PFOS_2	499.0 / 99.0	3.12	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.48	PFDA			
PFDA_2	513.0 / 219.0	3.48	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.81	PFUnA			
PFUnA_2	563.0 / 269.0	3.81	PFUnA	0.060	0.055	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.35	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.57	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.57	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.510	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.80	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.80	NEtFOSAA	0.070	0.065	ü

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Summary Ion Ratio Report

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Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:23:36	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.89	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.30	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.290	0.285	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.12	PFNA			
PFNA_2	463.0 / 219.0	3.12	PFNA	0.300	0.301	ü
PFOS_1	499.0 / 80.0	3.11	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.80	PFUnA			
PFUnA_2	563.0 / 269.0	3.80	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.09	PFDoA			
PFDoA_2	613.0 / 319.0	4.09	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.34	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.34	PFTrDA	0.070	0.067	ü
PFTeDA_1	713.0 / 669.0	4.56	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.56	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.570	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.79	NEtFOSAA	0.060	0.065	ü

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Summary Ion Ratio Report

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Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:34:28	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.56	PFBS	0.290	0.302	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.30	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.310	0.301	ü
PFOS_1	499.0 / 80.0	3.11	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.80	PFUnA			
PFUnA_2	563.0 / 269.0	3.80	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.08	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.33	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.33	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.55	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.55	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.63	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.63	NMeFOSAA	0.570	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.79	NEtFOSAA	0.060	0.065	ü

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Summary Ion Ratio Report

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Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:45:19	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.56	PFBS			
PFBS_2	298.9 / 99.0	1.55	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.080	0.071	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.71	PFOA			
PFOA_2	413.0 / 169.0	2.71	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.11	PFNA			
PFNA_2	463.0 / 219.0	3.11	PFNA	0.300	0.301	ü
PFOS_1	499.0 / 80.0	3.11	PFOS			
PFOS_2	499.0 / 99.0	3.11	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.47	PFDA			
PFDA_2	513.0 / 219.0	3.47	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	3.79	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.08	PFDoA			
PFDoA_2	613.0 / 319.0	4.08	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.33	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.33	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.55	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.55	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.62	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.62	NMeFOSAA	0.550	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.79	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.79	NEtFOSAA	0.060	0.065	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	2018-10-08T15:40:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
PFBS_1	298.9 / 80.0	1.57	13C3-PFBS	302.0 / 99.0	28430.62	232.25
PFBS_2	298.9 / 99.0	1.57	13C3-PFBS	302.0 / 99.0	28430.62	232.25
PFHxA_1	313.0 / 269.0	1.90	13C5-PFHxA	318.0 / 273.0	69346.03	250.00
PFHxA_2	313.0 / 119.0	1.90	13C5-PFHxA	318.0 / 273.0	69346.03	250.00
PFHpA_1	363.0 / 319.0	2.32	13C4-PFHpA	367.0 / 322.0	81490.43	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	81490.43	250.00
PFHxS_1	399.0 / 80.0	2.34	13C3-PFHxS	402.0 / 99.0	25654.13	236.50
PFHxS_2	399.0 / 99.0	2.34	13C3-PFHxS	402.0 / 99.0	25654.13	236.50
PFOA_1	413.0 / 369.0	2.73	13C8-PFOA	421.0 / 376.0	88667.45	250.00
PFOA_2	413.0 / 169.0	2.73	13C8-PFOA	421.0 / 376.0	88667.45	250.00
PFNA_1	463.0 / 419.0	3.14	13C9-PFNA	472.0 / 427.0	95060.67	250.00
PFNA_2	463.0 / 219.0	3.13	13C9-PFNA	472.0 / 427.0	95060.67	250.00
PFOS_1	499.0 / 80.0	3.14	13C8-PFOS	507.0 / 99.0	26685.55	239.25
PFOS_2	499.0 / 99.0	3.13	13C8-PFOS	507.0 / 99.0	26685.55	239.25
PFDA_1	513.0 / 469.0	3.50	13C6-PFDA	519.0 / 474.0	102747.84	250.00
PFDA_2	513.0 / 219.0	3.50	13C6-PFDA	519.0 / 474.0	102747.84	250.00
PFUnA_1	563.0 / 519.0	3.83	13C7-PFUnA	570.0 / 525.0	96456.00	250.00
PFUnA_2	563.0 / 269.0	3.83	13C7-PFUnA	570.0 / 525.0	96456.00	250.00
PFDoA_1	613.0 / 569.0	4.12	13C2-PFDoA	615.0 / 570.0	104536.27	250.00
PFDoA_2	613.0 / 319.0	4.12	13C2-PFDoA	615.0 / 570.0	104536.27	250.00
PFTrDA_1	663.0 / 619.0	4.37	13C2-PFTeDA	715.0 / 670.0	91146.52	250.00
PFTrDA_2	663.0 / 169.0	4.37	13C2-PFTeDA	715.0 / 670.0	91146.52	250.00
PFTeDA_1	713.0 / 669.0	4.59	13C2-PFTeDA	715.0 / 670.0	91146.52	250.00
PFTeDA_2	713.0 / 169.0	4.59	13C2-PFTeDA	715.0 / 670.0	91146.52	250.00
NMeFOSAA_1	570.0 / 419.0	3.66	d3-MeFOSAA	573.0 / 419.0	15939.93	250.00
NMeFOSAA_2	570.0 / 512.0	3.65	d3-MeFOSAA	573.0 / 419.0	15939.93	250.00
NEtFOSAA_1	584.0 / 419.0	3.82	d5-EtFOSAA	589.0 / 419.0	16543.90	250.00
NEtFOSAA_2	584.0 / 483.0	3.82	d5-EtFOSAA	589.0 / 419.0	16543.90	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	2018-10-08T15:51:02	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	31592.73	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	31592.73	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	68053.92	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	68053.92	250.00
PFHpA_1	363.0 / 319.0	2.31	13C4-PFHpA	367.0 / 322.0	77180.54	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	77180.54	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	25291.49	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	25291.49	236.50
PFOA_1	413.0 / 369.0	2.73	13C8-PFOA	421.0 / 376.0	94578.42	250.00
PFOA_2	413.0 / 169.0	2.72	13C8-PFOA	421.0 / 376.0	94578.42	250.00
PFNA_1	463.0 / 419.0	3.13	13C9-PFNA	472.0 / 427.0	105077.59	250.00
PFNA_2	463.0 / 219.0	3.13	13C9-PFNA	472.0 / 427.0	105077.59	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	30719.80	239.25
PFOS_2	499.0 / 99.0	3.12	13C8-PFOS	507.0 / 99.0	30719.80	239.25
PFDA_1	513.0 / 469.0	3.49	13C6-PFDA	519.0 / 474.0	104286.39	250.00
PFDA_2	513.0 / 219.0	3.49	13C6-PFDA	519.0 / 474.0	104286.39	250.00
PFUnA_1	563.0 / 519.0	3.82	13C7-PFUnA	570.0 / 525.0	104057.87	250.00
PFUnA_2	563.0 / 269.0	3.82	13C7-PFUnA	570.0 / 525.0	104057.87	250.00
PFDoA_1	613.0 / 569.0	4.11	13C2-PFDoA	615.0 / 570.0	105895.90	250.00
PFDoA_2	613.0 / 319.0	4.10	13C2-PFDoA	615.0 / 570.0	105895.90	250.00
PFTrDA_1	663.0 / 619.0	4.36	13C2-PFTeDA	715.0 / 670.0	91200.68	250.00
PFTrDA_2	663.0 / 169.0	4.36	13C2-PFTeDA	715.0 / 670.0	91200.68	250.00
PFTeDA_1	713.0 / 669.0	4.58	13C2-PFTeDA	715.0 / 670.0	91200.68	250.00
PFTeDA_2	713.0 / 169.0	4.58	13C2-PFTeDA	715.0 / 670.0	91200.68	250.00
NMeFOSAA_1	570.0 / 419.0	3.65	d3-MeFOSAA	573.0 / 419.0	13993.03	250.00
NMeFOSAA_2	570.0 / 512.0	3.65	d3-MeFOSAA	573.0 / 419.0	13993.03	250.00
NEtFOSAA_1	584.0 / 419.0	3.81	d5-EtFOSAA	589.0 / 419.0	19400.08	250.00
NEtFOSAA_2	584.0 / 483.0	3.80	d5-EtFOSAA	589.0 / 419.0	19400.08	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	2018-10-08T16:01:53	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	28878.08	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	28878.08	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	66586.02	250.00
PFHxA_2	313.0 / 119.0	1.89	13C5-PFHxA	318.0 / 273.0	66586.02	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	75806.83	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	75806.83	250.00
PFHxS_1	399.0 / 80.0	2.33	13C3-PFHxS	402.0 / 99.0	25391.07	236.50
PFHxS_2	399.0 / 99.0	2.33	13C3-PFHxS	402.0 / 99.0	25391.07	236.50
PFOA_1	413.0 / 369.0	2.72	13C8-PFOA	421.0 / 376.0	88230.59	250.00
PFOA_2	413.0 / 169.0	2.72	13C8-PFOA	421.0 / 376.0	88230.59	250.00
PFNA_1	463.0 / 419.0	3.12	13C9-PFNA	472.0 / 427.0	96191.41	250.00
PFNA_2	463.0 / 219.0	3.12	13C9-PFNA	472.0 / 427.0	96191.41	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	28442.60	239.25
PFOS_2	499.0 / 99.0	3.12	13C8-PFOS	507.0 / 99.0	28442.60	239.25
PFDA_1	513.0 / 469.0	3.48	13C6-PFDA	519.0 / 474.0	104257.56	250.00
PFDA_2	513.0 / 219.0	3.48	13C6-PFDA	519.0 / 474.0	104257.56	250.00
PFUnA_1	563.0 / 519.0	3.81	13C7-PFUnA	570.0 / 525.0	94050.81	250.00
PFUnA_2	563.0 / 269.0	3.81	13C7-PFUnA	570.0 / 525.0	94050.81	250.00
PFDoA_1	613.0 / 569.0	4.10	13C2-PFDoA	615.0 / 570.0	95733.32	250.00
PFDoA_2	613.0 / 319.0	4.10	13C2-PFDoA	615.0 / 570.0	95733.32	250.00
PFTrDA_1	663.0 / 619.0	4.35	13C2-PFTeDA	715.0 / 670.0	80061.69	250.00
PFTrDA_2	663.0 / 169.0	4.35	13C2-PFTeDA	715.0 / 670.0	80061.69	250.00
PFTeDA_1	713.0 / 669.0	4.57	13C2-PFTeDA	715.0 / 670.0	80061.69	250.00
PFTeDA_2	713.0 / 169.0	4.57	13C2-PFTeDA	715.0 / 670.0	80061.69	250.00
NMeFOSAA_1	570.0 / 419.0	3.64	d3-MeFOSAA	573.0 / 419.0	14678.96	250.00
NMeFOSAA_2	570.0 / 512.0	3.64	d3-MeFOSAA	573.0 / 419.0	14678.96	250.00
NEtFOSAA_1	584.0 / 419.0	3.81	d5-EtFOSAA	589.0 / 419.0	17704.11	250.00
NEtFOSAA_2	584.0 / 483.0	3.81	d5-EtFOSAA	589.0 / 419.0	17704.11	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	2018-10-08T16:12:44	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	31599.49	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	31599.49	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	68771.23	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	68771.23	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	78585.87	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	78585.87	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	24551.90	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	24551.90	236.50
PFOA_1	413.0 / 369.0	2.72	13C8-PFOA	421.0 / 376.0	103076.07	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	103076.07	250.00
PFNA_1	463.0 / 419.0	3.12	13C9-PFNA	472.0 / 427.0	102088.54	250.00
PFNA_2	463.0 / 219.0	3.12	13C9-PFNA	472.0 / 427.0	102088.54	250.00
PFOS_1	499.0 / 80.0	3.12	13C8-PFOS	507.0 / 99.0	34086.83	239.25
PFOS_2	499.0 / 99.0	3.12	13C8-PFOS	507.0 / 99.0	34086.83	239.25
PFDA_1	513.0 / 469.0	3.48	13C6-PFDA	519.0 / 474.0	109548.88	250.00
PFDA_2	513.0 / 219.0	3.48	13C6-PFDA	519.0 / 474.0	109548.88	250.00
PFUnA_1	563.0 / 519.0	3.81	13C7-PFUnA	570.0 / 525.0	103933.61	250.00
PFUnA_2	563.0 / 269.0	3.81	13C7-PFUnA	570.0 / 525.0	103933.61	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	107722.17	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	107722.17	250.00
PFTrDA_1	663.0 / 619.0	4.35	13C2-PFTeDA	715.0 / 670.0	85409.10	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	85409.10	250.00
PFTeDA_1	713.0 / 669.0	4.57	13C2-PFTeDA	715.0 / 670.0	85409.10	250.00
PFTeDA_2	713.0 / 169.0	4.57	13C2-PFTeDA	715.0 / 670.0	85409.10	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	14975.26	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	14975.26	250.00
NEtFOSAA_1	584.0 / 419.0	3.80	d5-EtFOSAA	589.0 / 419.0	17987.54	250.00
NEtFOSAA_2	584.0 / 483.0	3.80	d5-EtFOSAA	589.0 / 419.0	17987.54	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	2018-10-08T16:23:36	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	20750.77	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	20750.77	232.25
PFHxA_1	313.0 / 269.0	1.89	13C5-PFHxA	318.0 / 273.0	57596.77	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	57596.77	250.00
PFHpA_1	363.0 / 319.0	2.30	13C4-PFHpA	367.0 / 322.0	63214.26	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	63214.26	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	21504.85	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	21504.85	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	79906.80	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	79906.80	250.00
PFNA_1	463.0 / 419.0	3.12	13C9-PFNA	472.0 / 427.0	84120.62	250.00
PFNA_2	463.0 / 219.0	3.12	13C9-PFNA	472.0 / 427.0	84120.62	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	24749.09	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	24749.09	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	86367.67	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	86367.67	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	78564.77	250.00
PFUnA_2	563.0 / 269.0	3.80	13C7-PFUnA	570.0 / 525.0	78564.77	250.00
PFDoA_1	613.0 / 569.0	4.09	13C2-PFDoA	615.0 / 570.0	84273.58	250.00
PFDoA_2	613.0 / 319.0	4.09	13C2-PFDoA	615.0 / 570.0	84273.58	250.00
PFTrDA_1	663.0 / 619.0	4.34	13C2-PFTeDA	715.0 / 670.0	65153.94	250.00
PFTrDA_2	663.0 / 169.0	4.34	13C2-PFTeDA	715.0 / 670.0	65153.94	250.00
PFTeDA_1	713.0 / 669.0	4.56	13C2-PFTeDA	715.0 / 670.0	65153.94	250.00
PFTeDA_2	713.0 / 169.0	4.56	13C2-PFTeDA	715.0 / 670.0	65153.94	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	12856.87	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	12856.87	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	13757.11	250.00
NEtFOSAA_2	584.0 / 483.0	3.79	d5-EtFOSAA	589.0 / 419.0	13757.11	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	2018-10-08T16:34:28	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	25753.96	232.25
PFBS_2	298.9 / 99.0	1.56	13C3-PFBS	302.0 / 99.0	25753.96	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	54506.11	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	54506.11	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	62892.13	250.00
PFHpA_2	363.0 / 169.0	2.30	13C4-PFHpA	367.0 / 322.0	62892.13	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	19042.03	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	19042.03	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	71617.41	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	71617.41	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	83967.14	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	83967.14	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	24380.31	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	24380.31	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	79366.11	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	79366.11	250.00
PFUnA_1	563.0 / 519.0	3.80	13C7-PFUnA	570.0 / 525.0	78520.40	250.00
PFUnA_2	563.0 / 269.0	3.80	13C7-PFUnA	570.0 / 525.0	78520.40	250.00
PFDoA_1	613.0 / 569.0	4.08	13C2-PFDoA	615.0 / 570.0	84232.72	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	84232.72	250.00
PFTrDA_1	663.0 / 619.0	4.33	13C2-PFTeDA	715.0 / 670.0	68266.05	250.00
PFTrDA_2	663.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	68266.05	250.00
PFTeDA_1	713.0 / 669.0	4.55	13C2-PFTeDA	715.0 / 670.0	68266.05	250.00
PFTeDA_2	713.0 / 169.0	4.55	13C2-PFTeDA	715.0 / 670.0	68266.05	250.00
NMeFOSAA_1	570.0 / 419.0	3.63	d3-MeFOSAA	573.0 / 419.0	13328.65	250.00
NMeFOSAA_2	570.0 / 512.0	3.63	d3-MeFOSAA	573.0 / 419.0	13328.65	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	11280.66	250.00
NEtFOSAA_2	584.0 / 483.0	3.79	d5-EtFOSAA	589.0 / 419.0	11280.66	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	2018-10-08T16:45:19	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	32017.85	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	32017.85	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	64968.77	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	64968.77	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	71102.55	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	71102.55	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	22496.52	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	22496.52	236.50
PFOA_1	413.0 / 369.0	2.71	13C8-PFOA	421.0 / 376.0	80574.39	250.00
PFOA_2	413.0 / 169.0	2.71	13C8-PFOA	421.0 / 376.0	80574.39	250.00
PFNA_1	463.0 / 419.0	3.11	13C9-PFNA	472.0 / 427.0	81867.96	250.00
PFNA_2	463.0 / 219.0	3.11	13C9-PFNA	472.0 / 427.0	81867.96	250.00
PFOS_1	499.0 / 80.0	3.11	13C8-PFOS	507.0 / 99.0	26117.18	239.25
PFOS_2	499.0 / 99.0	3.11	13C8-PFOS	507.0 / 99.0	26117.18	239.25
PFDA_1	513.0 / 469.0	3.47	13C6-PFDA	519.0 / 474.0	88770.62	250.00
PFDA_2	513.0 / 219.0	3.47	13C6-PFDA	519.0 / 474.0	88770.62	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	74327.70	250.00
PFUnA_2	563.0 / 269.0	3.79	13C7-PFUnA	570.0 / 525.0	74327.70	250.00
PFDoA_1	613.0 / 569.0	4.08	13C2-PFDoA	615.0 / 570.0	93999.68	250.00
PFDoA_2	613.0 / 319.0	4.08	13C2-PFDoA	615.0 / 570.0	93999.68	250.00
PFTrDA_1	663.0 / 619.0	4.33	13C2-PFTeDA	715.0 / 670.0	81130.37	250.00
PFTrDA_2	663.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	81130.37	250.00
PFTeDA_1	713.0 / 669.0	4.55	13C2-PFTeDA	715.0 / 670.0	81130.37	250.00
PFTeDA_2	713.0 / 169.0	4.55	13C2-PFTeDA	715.0 / 670.0	81130.37	250.00
NMeFOSAA_1	570.0 / 419.0	3.62	d3-MeFOSAA	573.0 / 419.0	13419.07	250.00
NMeFOSAA_2	570.0 / 512.0	3.62	d3-MeFOSAA	573.0 / 419.0	13419.07	250.00
NEtFOSAA_1	584.0 / 419.0	3.79	d5-EtFOSAA	589.0 / 419.0	14121.61	250.00
NEtFOSAA_2	584.0 / 483.0	3.79	d5-EtFOSAA	589.0 / 419.0	14121.61	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	2018-10-08T15:40:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4.11	13C2-PFDA	515.0 / 470.0	101004.57	250.00
d3-MeFOSAA	573.0 / 419.0	3.65	13C4-PFOS	503.0 / 99.0	30187.37	239.25
d5-EtFOSAA	589.0 / 419.0	3.81	13C4-PFOS	503.0 / 99.0	30187.37	239.25
13C5-PFHxA	318.0 / 273.0	1.89	13C2-PFOA	415.0 / 370.0	86591.46	250.00
13C4-PFHpA	367.0 / 322.0	2.30	13C2-PFOA	415.0 / 370.0	86591.46	250.00
13C8-PFOA	421.0 / 376.0	2.72	13C2-PFOA	415.0 / 370.0	86591.46	250.00
13C9-PFNA	472.0 / 427.0	3.12	13C2-PFOA	415.0 / 370.0	86591.46	250.00
13C6-PFDA	519.0 / 474.0	3.49	13C2-PFDA	515.0 / 470.0	101004.57	250.00
13C7-PFUnA	570.0 / 525.0	3.81	13C2-PFDA	515.0 / 470.0	101004.57	250.00
13C2-PFTeDA	715.0 / 670.0	4.59	13C2-PFDA	515.0 / 470.0	101004.57	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	30187.37	239.25
13C3-PFHxS	402.0 / 99.0	2.33	13C4-PFOS	503.0 / 99.0	30187.37	239.25
13C8-PFOS	507.0 / 99.0	3.12	13C4-PFOS	503.0 / 99.0	30187.37	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	2018-10-08T15:51:02	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.09	13C2-PFDA	515.0 / 470.0	106217.49	250.00
d3-MeFOSAA	573.0 / 419.0	3.64	13C4-PFOS	503.0 / 99.0	30121.59	239.25
d5-EtFOSAA	589.0 / 419.0	3.80	13C4-PFOS	503.0 / 99.0	30121.59	239.25
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	87760.75	250.00
13C4-PFHpA	367.0 / 322.0	2.30	13C2-PFOA	415.0 / 370.0	87760.75	250.00
13C8-PFOA	421.0 / 376.0	2.71	13C2-PFOA	415.0 / 370.0	87760.75	250.00
13C9-PFNA	472.0 / 427.0	3.11	13C2-PFOA	415.0 / 370.0	87760.75	250.00
13C6-PFDA	519.0 / 474.0	3.48	13C2-PFDA	515.0 / 470.0	106217.49	250.00
13C7-PFUnA	570.0 / 525.0	3.80	13C2-PFDA	515.0 / 470.0	106217.49	250.00
13C2-PFTeDA	715.0 / 670.0	4.57	13C2-PFDA	515.0 / 470.0	106217.49	250.00
13C3-PFBS	302.0 / 99.0	1.55	13C4-PFOS	503.0 / 99.0	30121.59	239.25
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	30121.59	239.25
13C8-PFOS	507.0 / 99.0	3.11	13C4-PFOS	503.0 / 99.0	30121.59	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	2018-10-08T16:01:53	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.09	13C2-PFDA	515.0 / 470.0	100766.55	250.00
d3-MeFOSAA	573.0 / 419.0	3.63	13C4-PFOS	503.0 / 99.0	27324.91	239.25
d5-EtFOSAA	589.0 / 419.0	3.80	13C4-PFOS	503.0 / 99.0	27324.91	239.25
13C5-PFHxA	318.0 / 273.0	1.88	13C2-PFOA	415.0 / 370.0	81109.93	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	81109.93	250.00
13C8-PFOA	421.0 / 376.0	2.71	13C2-PFOA	415.0 / 370.0	81109.93	250.00
13C9-PFNA	472.0 / 427.0	3.11	13C2-PFOA	415.0 / 370.0	81109.93	250.00
13C6-PFDA	519.0 / 474.0	3.47	13C2-PFDA	515.0 / 470.0	100766.55	250.00
13C7-PFUnA	570.0 / 525.0	3.80	13C2-PFDA	515.0 / 470.0	100766.55	250.00
13C2-PFTeDA	715.0 / 670.0	4.57	13C2-PFDA	515.0 / 470.0	100766.55	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	27324.91	239.25
13C3-PFHxS	402.0 / 99.0	2.32	13C4-PFOS	503.0 / 99.0	27324.91	239.25
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	27324.91	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	2018-10-08T16:12:44	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.08	13C2-PFDA	515.0 / 470.0	113933.91	250.00
d3-MeFOSAA	573.0 / 419.0	3.63	13C4-PFOS	503.0 / 99.0	32065.20	239.25
d5-EtFOSAA	589.0 / 419.0	3.79	13C4-PFOS	503.0 / 99.0	32065.20	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	89899.45	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	89899.45	250.00
13C8-PFOA	421.0 / 376.0	2.71	13C2-PFOA	415.0 / 370.0	89899.45	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	89899.45	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	113933.91	250.00
13C7-PFUnA	570.0 / 525.0	3.79	13C2-PFDA	515.0 / 470.0	113933.91	250.00
13C2-PFTeDA	715.0 / 670.0	4.56	13C2-PFDA	515.0 / 470.0	113933.91	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	32065.20	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	32065.20	239.25
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	32065.20	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	2018-10-08T16:23:36	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	86580.45	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	25614.67	239.25
d5-EtFOSAA	589.0 / 419.0	3.79	13C4-PFOS	503.0 / 99.0	25614.67	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	74719.21	250.00
13C4-PFHpA	367.0 / 322.0	2.29	13C2-PFOA	415.0 / 370.0	74719.21	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	74719.21	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	74719.21	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	86580.45	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	86580.45	250.00
13C2-PFTeDA	715.0 / 670.0	4.55	13C2-PFDA	515.0 / 470.0	86580.45	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	25614.67	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	25614.67	239.25
13C8-PFOS	507.0 / 99.0	3.10	13C4-PFOS	503.0 / 99.0	25614.67	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	2018-10-08T16:34:28	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	82606.87	250.00
d3-MeFOSAA	573.0 / 419.0	3.62	13C4-PFOS	503.0 / 99.0	27558.53	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	27558.53	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	71860.81	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	71860.81	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	71860.81	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	71860.81	250.00
13C6-PFDA	519.0 / 474.0	3.46	13C2-PFDA	515.0 / 470.0	82606.87	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	82606.87	250.00
13C2-PFTeDA	715.0 / 670.0	4.55	13C2-PFDA	515.0 / 470.0	82606.87	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	27558.53	239.25
13C3-PFHxS	402.0 / 99.0	2.31	13C4-PFOS	503.0 / 99.0	27558.53	239.25
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	27558.53	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	2018-10-08T16:45:19	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	92416.04	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	26374.66	239.25
d5-EtFOSAA	589.0 / 419.0	3.78	13C4-PFOS	503.0 / 99.0	26374.66	239.25
13C5-PFHxA	318.0 / 273.0	1.87	13C2-PFOA	415.0 / 370.0	75346.19	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	75346.19	250.00
13C8-PFOA	421.0 / 376.0	2.70	13C2-PFOA	415.0 / 370.0	75346.19	250.00
13C9-PFNA	472.0 / 427.0	3.10	13C2-PFOA	415.0 / 370.0	75346.19	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	92416.04	250.00
13C7-PFUnA	570.0 / 525.0	3.78	13C2-PFDA	515.0 / 470.0	92416.04	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	92416.04	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	26374.66	239.25
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	26374.66	239.25
13C8-PFOS	507.0 / 99.0	3.09	13C4-PFOS	503.0 / 99.0	26374.66	239.25

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QC Summary Report

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	903.938722	1010.00	89.50
PFBS_2	298.9 / 99.0	1.55	861.720770	1010.00	85.32
PFHxA_1	313.0 / 269.0	1.88	965.638096	1010.00	95.61
PFHxA_2	313.0 / 119.0	1.88	1020.663415	1010.00	101.06
PFHpA_1	363.0 / 319.0	2.29	870.096664	1000.00	87.01
PFHpA_2	363.0 / 169.0	2.29	703.985432	1000.00	70.40
PFHxS_1	399.0 / 80.0	2.31	995.286766	1010.00	98.54
PFHxS_2	399.0 / 99.0	2.31	987.096947	1010.00	97.73
PFOA_1	413.0 / 369.0	2.70	944.679231	1000.00	94.47
PFOA_2	413.0 / 169.0	2.70	928.404131	1000.00	92.84
PFNA_1	463.0 / 419.0	3.10	925.668029	1000.00	92.57
PFNA_2	463.0 / 219.0	3.10	916.150436	1000.00	91.62
PFOS_1	499.0 / 80.0	3.10	915.152388	1000.00	91.52
PFOS_2	499.0 / 99.0	3.10	974.475969	1000.00	97.45
PFDA_1	513.0 / 469.0	3.46	1033.203821	1000.00	103.32
PFDA_2	513.0 / 219.0	3.46	988.892650	1000.00	98.89
PFUnA_1	563.0 / 519.0	3.79	898.971998	1000.00	89.90
PFUnA_2	563.0 / 269.0	3.79	864.469912	1000.00	86.45
PFDoA_1	613.0 / 569.0	4.07	1043.739460	1000.00	104.37
PFDoA_2	613.0 / 319.0	4.07	997.820905	1000.00	99.78
PFTrDA_1	663.0 / 619.0	4.32	1091.077999	1000.00	109.11
PFTrDA_2	663.0 / 169.0	4.32	1012.095559	1000.00	101.21
PFTeDA_1	713.0 / 669.0	4.54	1017.844307	1000.00	101.78
PFTeDA_2	713.0 / 169.0	4.54	992.038822	1000.00	99.20
NMeFOSAA_1	570.0 / 419.0	3.61	851.653312	1000.00	85.17
NMeFOSAA_2	570.0 / 512.0	3.61	875.594076	1000.00	87.56
NEtFOSAA_1	584.0 / 419.0	3.78	910.854268	1000.00	91.09
NEtFOSAA_2	584.0 / 483.0	3.78	955.175298	1000.00	95.52

Sample Name	KB77 CCV	**Injection Vial**	25
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	2521.197682	2525.00	99.85
PFBS_2	298.9 / 99.0	1.53	2476.799210	2525.00	98.09
PFHxA_1	313.0 / 269.0	1.85	2577.223565	2525.00	102.07
PFHxA_2	313.0 / 119.0	1.85	2476.708290	2525.00	98.09
PFHpA_1	363.0 / 319.0	2.26	2453.306276	2500.00	98.13
PFHpA_2	363.0 / 169.0	2.26	2295.784793	2500.00	91.83
PFHxS_1	399.0 / 80.0	2.28	2488.351735	2525.00	98.55
PFHxS_2	399.0 / 99.0	2.28	2475.027661	2525.00	98.02
PFOA_1	413.0 / 369.0	2.67	2619.482432	2500.00	104.78
PFOA_2	413.0 / 169.0	2.67	2252.424453	2500.00	90.10
PFNA_1	463.0 / 419.0	3.07	2663.384694	2500.00	106.54
PFNA_2	463.0 / 219.0	3.07	2738.187055	2500.00	109.53
PFOS_1	499.0 / 80.0	3.07	2586.319453	2500.00	103.45
PFOS_2	499.0 / 99.0	3.06	2643.704819	2500.00	105.75
PFDA_1	513.0 / 469.0	3.42	2472.989458	2500.00	98.92
PFDA_2	513.0 / 219.0	3.42	2169.806664	2500.00	86.79
PFUnA_1	563.0 / 519.0	3.75	2575.962141	2500.00	103.04
PFUnA_2	563.0 / 269.0	3.75	2581.112145	2500.00	103.24
PFDoA_1	613.0 / 569.0	4.03	2504.739135	2500.00	100.19
PFDoA_2	613.0 / 319.0	4.03	2483.881753	2500.00	99.36
PFTrDA_1	663.0 / 619.0	4.27	2719.917293	2500.00	108.80
PFTrDA_2	663.0 / 169.0	4.27	2681.199681	2500.00	107.25
PFTeDA_1	713.0 / 669.0	4.49	2538.871502	2500.00	101.55
PFTeDA_2	713.0 / 169.0	4.49	2522.620872	2500.00	100.90
NMeFOSAA_1	570.0 / 419.0	3.58	2492.086957	2500.00	99.68
NMeFOSAA_2	570.0 / 512.0	3.58	2376.073793	2500.00	95.04
NEtFOSAA_1	584.0 / 419.0	3.74	2258.558056	2500.00	90.34
NEtFOSAA_2	584.0 / 483.0	3.74	2179.432463	2500.00	87.18

Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	955.983233	1010.00	94.65
PFBS_2	298.9 / 99.0	1.53	980.942234	1010.00	97.12
PFHxA_1	313.0 / 269.0	1.85	990.421295	1010.00	98.06
PFHxA_2	313.0 / 119.0	1.85	1004.295061	1010.00	99.44
PFHpA_1	363.0 / 319.0	2.26	988.629620	1000.00	98.86
PFHpA_2	363.0 / 169.0	2.26	1074.238252	1000.00	107.42
PFHxS_1	399.0 / 80.0	2.28	958.882744	1010.00	94.94
PFHxS_2	399.0 / 99.0	2.28	953.601601	1010.00	94.42
PFOA_1	413.0 / 369.0	2.67	955.703321	1000.00	95.57
PFOA_2	413.0 / 169.0	2.67	939.727369	1000.00	93.97
PFNA_1	463.0 / 419.0	3.06	980.425354	1000.00	98.04
PFNA_2	463.0 / 219.0	3.06	1091.406125	1000.00	109.14
PFOS_1	499.0 / 80.0	3.06	1021.420956	1000.00	102.14
PFOS_2	499.0 / 99.0	3.06	1049.335474	1000.00	104.93
PFDA_1	513.0 / 469.0	3.42	1030.102963	1000.00	103.01
PFDA_2	513.0 / 219.0	3.41	927.830652	1000.00	92.78
PFUnA_1	563.0 / 519.0	3.74	1048.538550	1000.00	104.85
PFUnA_2	563.0 / 269.0	3.74	949.899217	1000.00	94.99
PFDoA_1	613.0 / 569.0	4.03	1026.926309	1000.00	102.69
PFDoA_2	613.0 / 319.0	4.03	1052.653789	1000.00	105.27
PFTrDA_1	663.0 / 619.0	4.27	1110.747329	1000.00	111.07
PFTrDA_2	663.0 / 169.0	4.27	1090.554276	1000.00	109.06
PFTeDA_1	713.0 / 669.0	4.49	1037.252752	1000.00	103.73
PFTeDA_2	713.0 / 169.0	4.49	982.114578	1000.00	98.21
NMeFOSAA_1	570.0 / 419.0	3.57	1082.923952	1000.00	108.29
NMeFOSAA_2	570.0 / 512.0	3.57	1041.277672	1000.00	104.13
NEtFOSAA_1	584.0 / 419.0	3.73	952.670000	1000.00	95.27
NEtFOSAA_2	584.0 / 483.0	3.73	951.071008	1000.00	95.11

Sample Name	KB77 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	2614.075020	2525.00	103.53
PFBS_2	298.9 / 99.0	1.53	2572.430676	2525.00	101.88
PFHxA_1	313.0 / 269.0	1.85	2350.898462	2525.00	93.10
PFHxA_2	313.0 / 119.0	1.85	2437.033133	2525.00	96.52
PFHpA_1	363.0 / 319.0	2.26	2287.802306	2500.00	91.51
PFHpA_2	363.0 / 169.0	2.25	2077.056136	2500.00	83.08
PFHxS_1	399.0 / 80.0	2.28	2413.660174	2525.00	95.59
PFHxS_2	399.0 / 99.0	2.28	2522.014899	2525.00	99.88
PFOA_1	413.0 / 369.0	2.67	2590.046214	2500.00	103.60
PFOA_2	413.0 / 169.0	2.67	2438.441031	2500.00	97.54
PFNA_1	463.0 / 419.0	3.06	2393.527041	2500.00	95.74
PFNA_2	463.0 / 219.0	3.06	2578.853063	2500.00	103.15
PFOS_1	499.0 / 80.0	3.06	2950.709338	2500.00	118.03
PFOS_2	499.0 / 99.0	3.06	2909.080901	2500.00	116.36
PFDA_1	513.0 / 469.0	3.41	2691.115902	2500.00	107.64
PFDA_2	513.0 / 219.0	3.41	2533.518005	2500.00	101.34
PFUnA_1	563.0 / 519.0	3.73	2355.083942	2500.00	94.20
PFUnA_2	563.0 / 269.0	3.73	2300.827445	2500.00	92.03
PFDoA_1	613.0 / 569.0	4.01	2601.905190	2500.00	104.08
PFDoA_2	613.0 / 319.0	4.01	2673.968116	2500.00	106.96
PFTrDA_1	663.0 / 619.0	4.26	2750.487657	2500.00	110.02
PFTrDA_2	663.0 / 169.0	4.26	2725.175753	2500.00	109.01
PFTeDA_1	713.0 / 669.0	4.47	2508.994640	2500.00	100.36
PFTeDA_2	713.0 / 169.0	4.47	2489.226946	2500.00	99.57
NMeFOSAA_1	570.0 / 419.0	3.57	2600.899862	2500.00	104.04
NMeFOSAA_2	570.0 / 512.0	3.57	2358.072457	2500.00	94.32
NEtFOSAA_1	584.0 / 419.0	3.73	2479.483636	2500.00	99.18
NEtFOSAA_2	584.0 / 483.0	3.73	2814.704363	2500.00	112.59

QC Summary Report

Sample Name	KB76 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:58:51	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	976.896718	1010.00	96.72
PFBS_2	298.9 / 99.0	1.53	1012.934501	1010.00	100.29
PFHxA_1	313.0 / 269.0	1.85	979.182745	1010.00	96.95
PFHxA_2	313.0 / 119.0	1.85	1052.594958	1010.00	104.22
PFHpA_1	363.0 / 319.0	2.26	968.377821	1000.00	96.84
PFHpA_2	363.0 / 169.0	2.26	918.924842	1000.00	91.89
PFHxS_1	399.0 / 80.0	2.28	974.418362	1010.00	96.48
PFHxS_2	399.0 / 99.0	2.28	966.740914	1010.00	95.72
PFOA_1	413.0 / 369.0	2.67	1026.134046	1000.00	102.61
PFOA_2	413.0 / 169.0	2.67	792.605073	1000.00	79.26
PFNA_1	463.0 / 419.0	3.06	1044.932545	1000.00	104.49
PFNA_2	463.0 / 219.0	3.06	1038.078450	1000.00	103.81
PFOS_1	499.0 / 80.0	3.06	1055.593815	1000.00	105.56
PFOS_2	499.0 / 99.0	3.06	1110.903353	1000.00	111.09
PFDA_1	513.0 / 469.0	3.41	1043.459871	1000.00	104.35
PFDA_2	513.0 / 219.0	3.41	833.392732	1000.00	83.34
PFUnA_1	563.0 / 519.0	3.73	976.280294	1000.00	97.63
PFUnA_2	563.0 / 269.0	3.73	995.785269	1000.00	99.58
PFDoA_1	613.0 / 569.0	4.02	973.987000	1000.00	97.40
PFDoA_2	613.0 / 319.0	4.02	1023.324804	1000.00	102.33
PFTrDA_1	663.0 / 619.0	4.26	1131.686399	1000.00	113.17
PFTrDA_2	663.0 / 169.0	4.26	1109.323366	1000.00	110.93
PFTeDA_1	713.0 / 669.0	4.48	1028.392316	1000.00	102.84
PFTeDA_2	713.0 / 169.0	4.48	997.386962	1000.00	99.74
NMeFOSAA_1	570.0 / 419.0	3.57	1049.070472	1000.00	104.91
NMeFOSAA_2	570.0 / 512.0	3.57	998.283502	1000.00	99.83
NEtFOSAA_1	584.0 / 419.0	3.73	922.040734	1000.00	92.20
NEtFOSAA_2	584.0 / 483.0	3.73	890.344792	1000.00	89.03

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.06	250.781173	250.00	100.31
d3-MeFOSAA	573.0 / 419.0	3.61	257.448822	250.00	102.98
d5-EtFOSAA	589.0 / 419.0	3.77	250.471875	250.00	100.19
13C5-PFHxA	318.0 / 273.0	1.86	213.460285	250.00	85.38
13C4-PFHpA	367.0 / 322.0	2.28	228.890405	250.00	91.56
13C8-PFOA	421.0 / 376.0	2.69	219.363629	250.00	87.75
13C9-PFNA	472.0 / 427.0	3.09	233.795566	250.00	93.52
13C6-PFDA	519.0 / 474.0	3.45	253.001410	250.00	101.20
13C7-PFUnA	570.0 / 525.0	3.77	263.752738	250.00	105.50
13C2-PFTeDA	715.0 / 670.0	4.54	239.957460	250.00	95.98
13C3-PFBS	302.0 / 99.0	1.54	227.789521	232.25	98.08
13C3-PFHxS	402.0 / 99.0	2.30	227.865205	236.50	96.35
13C8-PFOS	507.0 / 99.0	3.08	239.793976	239.25	100.23

Sample Name	KB77 CCV	**Injection Vial**	25
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	242.789024	250.00	97.12
d3-MeFOSAA	573.0 / 419.0	3.57	261.126408	250.00	104.45
d5-EtFOSAA	589.0 / 419.0	3.73	280.218582	250.00	112.09
13C5-PFHxA	318.0 / 273.0	1.84	221.113283	250.00	88.45
13C4-PFHpA	367.0 / 322.0	2.25	218.235829	250.00	87.29
13C8-PFOA	421.0 / 376.0	2.66	231.075640	250.00	92.43
13C9-PFNA	472.0 / 427.0	3.05	220.400027	250.00	88.16
13C6-PFDA	519.0 / 474.0	3.41	256.840461	250.00	102.74
13C7-PFUnA	570.0 / 525.0	3.73	241.923158	250.00	96.77
13C2-PFTeDA	715.0 / 670.0	4.48	230.670201	250.00	92.27
13C3-PFBS	302.0 / 99.0	1.52	231.758772	232.25	99.79
13C3-PFHxS	402.0 / 99.0	2.27	238.075870	236.50	100.67
13C8-PFOS	507.0 / 99.0	3.05	232.722603	239.25	97.27

Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	234.077115	250.00	93.63
d3-MeFOSAA	573.0 / 419.0	3.57	239.339029	250.00	95.74
d5-EtFOSAA	589.0 / 419.0	3.73	248.809209	250.00	99.52
13C5-PFHxA	318.0 / 273.0	1.84	236.836371	250.00	94.73
13C4-PFHpA	367.0 / 322.0	2.25	218.539557	250.00	87.42
13C8-PFOA	421.0 / 376.0	2.66	256.275626	250.00	102.51
13C9-PFNA	472.0 / 427.0	3.05	229.559597	250.00	91.82
13C6-PFDA	519.0 / 474.0	3.40	244.575005	250.00	97.83
13C7-PFUnA	570.0 / 525.0	3.73	253.533458	250.00	101.41
13C2-PFTeDA	715.0 / 670.0	4.48	224.386711	250.00	89.75
13C3-PFBS	302.0 / 99.0	1.52	225.722036	232.25	97.19
13C3-PFHxS	402.0 / 99.0	2.27	244.487287	236.50	103.38
13C8-PFOS	507.0 / 99.0	3.05	225.626062	239.25	94.31

Sample Name	KB77 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Conc. (ng/L)	Target Conc. (ng/L)	Recovery (%)
13C2-PFDoA	615.0 / 570.0	4.00	232.908647	250.00	93.16
d3-MeFOSAA	573.0 / 419.0	3.56	259.342108	250.00	103.74
d5-EtFOSAA	589.0 / 419.0	3.72	281.029067	250.00	112.41
13C5-PFHxA	318.0 / 273.0	1.84	251.393453	250.00	100.56
13C4-PFHpA	367.0 / 322.0	2.25	237.224398	250.00	94.89
13C8-PFOA	421.0 / 376.0	2.66	254.037851	250.00	101.62
13C9-PFNA	472.0 / 427.0	3.05	247.049175	250.00	98.82
13C6-PFDA	519.0 / 474.0	3.40	233.388938	250.00	93.36
13C7-PFUnA	570.0 / 525.0	3.72	267.817718	250.00	107.13
13C2-PFTeDA	715.0 / 670.0	4.47	224.251658	250.00	89.70
13C3-PFBS	302.0 / 99.0	1.51	225.697409	232.25	97.18
13C3-PFHxS	402.0 / 99.0	2.27	239.691544	236.50	101.35
13C8-PFOS	507.0 / 99.0	3.05	216.345287	239.25	90.43

Sample Name	KB76 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:58:51	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	233.363251	250.00	93.35
d3-MeFOSAA	573.0 / 419.0	3.56	251.527098	250.00	100.61
d5-EtFOSAA	589.0 / 419.0	3.72	298.371067	250.00	119.35
13C5-PFHxA	318.0 / 273.0	1.84	221.282154	250.00	88.51
13C4-PFHpA	367.0 / 322.0	2.25	212.528307	250.00	85.01
13C8-PFOA	421.0 / 376.0	2.65	245.644522	250.00	98.26
13C9-PFNA	472.0 / 427.0	3.05	231.840497	250.00	92.74
13C6-PFDA	519.0 / 474.0	3.40	249.301679	250.00	99.72
13C7-PFUnA	570.0 / 525.0	3.72	259.237261	250.00	103.69
13C2-PFTeDA	715.0 / 670.0	4.47	219.933663	250.00	87.97
13C3-PFBS	302.0 / 99.0	1.52	222.839303	232.25	95.95
13C3-PFHxS	402.0 / 99.0	2.27	237.576121	236.50	100.46
13C8-PFOS	507.0 / 99.0	3.05	233.556997	239.25	97.62

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Summary Quant 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	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	338749.26	903.938722	495.6	false
PFBS_2	298.9 / 99.0	1.55	96580.99	861.720770	412.4	false
PFHxA_1	313.0 / 269.0	1.88	260387.48	965.638096	70.1	false
PFHxA_2	313.0 / 119.0	1.88	19955.31	1020.663415	50.8	false
PFHpA_1	363.0 / 319.0	2.29	248902.55	870.096664	173.3	false
PFHpA_2	363.0 / 169.0	2.29	4258.51	703.985432	99.5	true
PFHxS_1	399.0 / 80.0	2.31	380451.85	995.286766	290.1	false
PFHxS_2	399.0 / 99.0	2.31	106470.82	987.096947	448.9	false
PFOA_1	413.0 / 369.0	2.70	339192.24	944.679231	280.7	false
PFOA_2	413.0 / 169.0	2.70	21817.35	928.404131	204.1	false
PFNA_1	463.0 / 419.0	3.10	341970.55	925.668029	308.7	false
PFNA_2	463.0 / 219.0	3.10	102698.67	916.150436	351.7	false
PFOS_1	499.0 / 80.0	3.10	512238.44	915.152388	200.5	false
PFOS_2	499.0 / 99.0	3.10	94847.93	974.475969	521.8	false
PFDA_1	513.0 / 469.0	3.46	392759.56	1033.203821	418.0	false
PFDA_2	513.0 / 219.0	3.46	16453.04	988.892650	206.8	false
PFUnA_1	563.0 / 519.0	3.79	351905.51	898.971998	279.3	false
PFUnA_2	563.0 / 269.0	3.79	17694.87	864.469912	197.7	false
PFDoA_1	613.0 / 569.0	4.07	371562.61	1043.739460	378.5	false
PFDoA_2	613.0 / 319.0	4.07	56247.00	997.820905	384.1	false
PFTrDA_1	663.0 / 619.0	4.32	324662.44	1091.077999	567.9	false
PFTrDA_2	663.0 / 169.0	4.32	19740.99	1012.095559	304.4	false
PFTeDA_1	713.0 / 669.0	4.54	350243.66	1017.844307	1136.5	false
PFTeDA_2	713.0 / 169.0	4.54	16592.01	992.038822	632.9	false
NMeFOSAA_1	570.0 / 419.0	3.61	60400.71	851.653312	647.9	false
NMeFOSAA_2	570.0 / 512.0	3.61	34029.15	875.594076	337.4	false
NEtFOSAA_1	584.0 / 419.0	3.78	61089.68	910.854268	498.5	false
NEtFOSAA_2	584.0 / 483.0	3.78	4041.33	955.175298	139.9	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	25
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	938241.70	2521.197682	889.3	false
PFBS_2	298.9 / 99.0	1.53	273271.51	2476.799210	801.9	false
PFHxA_1	313.0 / 269.0	1.85	688966.53	2577.223565	168.7	false
PFHxA_2	313.0 / 119.0	1.85	48972.16	2476.708290	130.5	false
PFHpA_1	363.0 / 319.0	2.26	645737.56	2453.306276	368.8	false
PFHpA_2	363.0 / 169.0	2.26	12247.16	2295.784793	187.3	false
PFHxS_1	399.0 / 80.0	2.28	973030.60	2488.351735	613.4	false
PFHxS_2	399.0 / 99.0	2.28	271914.10	2475.027661	838.0	false
PFOA_1	413.0 / 369.0	2.67	960713.81	2619.482432	510.5	false
PFOA_2	413.0 / 169.0	2.67	53043.72	2252.424453	444.7	false
PFNA_1	463.0 / 419.0	3.07	893378.26	2663.384694	578.0	false
PFNA_2	463.0 / 219.0	3.07	279431.10	2738.187055	675.6	false
PFOS_1	499.0 / 80.0	3.07	1415534.13	2586.319453	373.5	false
PFOS_2	499.0 / 99.0	3.06	252438.75	2643.704819	736.2	false
PFDA_1	513.0 / 469.0	3.42	1068425.18	2472.989458	551.3	false
PFDA_2	513.0 / 219.0	3.42	40693.86	2169.806664	275.0	false
PFUnA_1	563.0 / 519.0	3.75	1061086.22	2575.962141	511.9	false
PFUnA_2	563.0 / 269.0	3.75	53852.44	2581.112145	278.8	false
PFDoA_1	613.0 / 569.0	4.03	973216.05	2504.739135	585.0	false
PFDoA_2	613.0 / 319.0	4.03	151932.90	2483.881753	635.8	false
PFTrDA_1	663.0 / 619.0	4.27	885171.90	2719.917293	809.1	false
PFTrDA_2	663.0 / 169.0	4.27	56508.42	2681.199681	543.9	false
PFTeDA_1	713.0 / 669.0	4.49	946695.96	2538.871502	1815.0	false
PFTeDA_2	713.0 / 169.0	4.49	45527.89	2522.620872	1150.3	false
NMeFOSAA_1	570.0 / 419.0	3.58	167893.20	2492.086957	1067.6	false
NMeFOSAA_2	570.0 / 512.0	3.58	88567.51	2376.073793	778.4	false
NEtFOSAA_1	584.0 / 419.0	3.74	168832.02	2258.558056	725.0	false
NEtFOSAA_2	584.0 / 483.0	3.74	10134.26	2179.432463	2300.2	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	357591.05	955.983233	598.2	false
PFBS_2	298.9 / 99.0	1.53	109437.09	980.942234	419.4	false
PFHxA_1	313.0 / 269.0	1.85	282283.93	990.421295	94.1	false
PFHxA_2	313.0 / 119.0	1.85	20791.24	1004.295061	70.5	false
PFHpA_1	363.0 / 319.0	2.26	256320.88	988.629620	212.8	false
PFHpA_2	363.0 / 169.0	2.26	5721.71	1074.238252	144.7	false
PFHxS_1	399.0 / 80.0	2.28	394130.78	958.882744	446.4	false
PFHxS_2	399.0 / 99.0	2.28	110625.40	953.601601	507.3	false
PFOA_1	413.0 / 369.0	2.67	382284.06	955.703321	327.4	false
PFOA_2	413.0 / 169.0	2.67	24591.22	939.727369	242.3	false
PFNA_1	463.0 / 419.0	3.06	338438.35	980.425354	349.6	false
PFNA_2	463.0 / 219.0	3.06	113882.35	1091.406125	415.0	false
PFOS_1	499.0 / 80.0	3.06	581414.54	1021.420956	207.7	false
PFOS_2	499.0 / 99.0	3.06	103939.13	1049.335474	428.6	false
PFDA_1	513.0 / 469.0	3.42	420283.61	1030.102963	459.4	false
PFDA_2	513.0 / 219.0	3.41	16639.77	927.830652	234.3	false
PFUnA_1	563.0 / 519.0	3.74	437538.08	1048.538550	324.9	false
PFUnA_2	563.0 / 269.0	3.74	20647.30	949.899217	173.8	false
PFDoA_1	613.0 / 569.0	4.03	379034.20	1026.926309	543.6	false
PFDoA_2	613.0 / 319.0	4.03	61336.08	1052.653789	403.9	false
PFTrDA_1	663.0 / 619.0	4.27	342968.74	1110.747329	696.7	false
PFTrDA_2	663.0 / 169.0	4.27	22017.78	1090.554276	330.3	false
PFTeDA_1	713.0 / 669.0	4.49	370257.52	1037.252752	1432.6	false
PFTeDA_2	713.0 / 169.0	4.49	17058.94	982.114578	701.7	false
NMeFOSAA_1	570.0 / 419.0	3.57	68426.83	1082.923952	607.0	false
NMeFOSAA_2	570.0 / 512.0	3.57	36198.66	1041.277672	349.5	false
NEtFOSAA_1	584.0 / 419.0	3.73	64468.83	952.670000	674.6	false
NEtFOSAA_2	584.0 / 483.0	3.73	4058.35	951.071008	209.3	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	1041703.87	2614.075020	1081.4	false
PFBS_2	298.9 / 99.0	1.53	303871.07	2572.430676	751.0	false
PFHxA_1	313.0 / 269.0	1.85	734674.67	2350.898462	159.1	false
PFHxA_2	313.0 / 119.0	1.85	56225.27	2437.033133	138.0	false
PFHpA_1	363.0 / 319.0	2.26	672367.20	2287.802306	321.2	false
PFHpA_2	363.0 / 169.0	2.25	12399.82	2077.056136	220.9	false
PFHxS_1	399.0 / 80.0	2.28	1033862.31	2413.660174	600.7	false
PFHxS_2	399.0 / 99.0	2.28	303419.55	2522.014899	804.6	false
PFOA_1	413.0 / 369.0	2.67	1071699.52	2590.046214	544.8	false
PFOA_2	413.0 / 169.0	2.67	64631.36	2438.441031	416.5	false
PFNA_1	463.0 / 419.0	3.06	925026.61	2393.527041	519.9	false
PFNA_2	463.0 / 219.0	3.06	302934.26	2578.853063	779.7	false
PFOS_1	499.0 / 80.0	3.06	1579470.62	2950.709338	295.7	false
PFOS_2	499.0 / 99.0	3.06	271747.73	2909.080901	522.6	false
PFDA_1	513.0 / 469.0	3.41	1129722.68	2691.115902	627.5	false
PFDA_2	513.0 / 219.0	3.41	46036.57	2533.518005	420.0	false
PFUnA_1	563.0 / 519.0	3.73	1150626.23	2355.083942	441.2	false
PFUnA_2	563.0 / 269.0	3.73	57054.16	2300.827445	365.7	false
PFDoA_1	613.0 / 569.0	4.01	1038208.23	2601.905190	532.5	false
PFDoA_2	613.0 / 319.0	4.01	167839.26	2673.968116	440.2	false
PFTrDA_1	663.0 / 619.0	4.26	932037.45	2750.487657	929.4	false
PFTrDA_2	663.0 / 169.0	4.26	59794.93	2725.175753	513.1	false
PFTeDA_1	713.0 / 669.0	4.47	974410.81	2508.994640	1817.7	false
PFTeDA_2	713.0 / 169.0	4.47	46793.54	2489.226946	965.9	false
NMeFOSAA_1	570.0 / 419.0	3.57	193914.21	2600.899862	1082.7	false
NMeFOSAA_2	570.0 / 512.0	3.57	97324.46	2358.072457	746.7	false
NEtFOSAA_1	584.0 / 419.0	3.73	192850.80	2479.483636	923.3	false
NEtFOSAA_2	584.0 / 483.0	3.73	13595.14	2814.704363	249.6	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:58:51	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	340254.72	976.896718	521.7	false
PFBS_2	298.9 / 99.0	1.53	105173.68	1012.934501	393.5	false
PFHxA_1	313.0 / 269.0	1.85	260193.01	979.182745	85.3	false
PFHxA_2	313.0 / 119.0	1.85	20279.48	1052.594958	69.0	false
PFHpA_1	363.0 / 319.0	2.26	243674.83	968.377821	194.8	false
PFHpA_2	363.0 / 169.0	2.26	4799.21	918.924842	175.1	false
PFHxS_1	399.0 / 80.0	2.28	375045.84	974.418362	346.5	false
PFHxS_2	399.0 / 99.0	2.28	105010.21	966.740914	609.6	false
PFOA_1	413.0 / 369.0	2.67	391434.11	1026.134046	317.2	false
PFOA_2	413.0 / 169.0	2.67	20075.63	792.605073	278.5	false
PFNA_1	463.0 / 419.0	3.06	362359.57	1044.932545	313.7	false
PFNA_2	463.0 / 219.0	3.06	109275.88	1038.078450	380.0	false
PFOS_1	499.0 / 80.0	3.06	565372.97	1055.593815	219.0	false
PFOS_2	499.0 / 99.0	3.06	103538.84	1110.903353	413.6	false
PFDA_1	513.0 / 469.0	3.41	429232.49	1043.459871	372.3	false
PFDA_2	513.0 / 219.0	3.41	15200.93	833.392732	236.1	false
PFUnA_1	563.0 / 519.0	3.73	412465.69	976.280294	279.8	false
PFUnA_2	563.0 / 269.0	3.73	21854.48	995.785269	244.8	false
PFDoA_1	613.0 / 569.0	4.02	355456.29	973.987000	362.1	false
PFDoA_2	613.0 / 319.0	4.02	58909.02	1023.324804	354.4	false
PFTrDA_1	663.0 / 619.0	4.26	338848.82	1131.686399	693.7	false
PFTrDA_2	663.0 / 169.0	4.26	21713.17	1109.323366	390.2	false
PFTeDA_1	713.0 / 669.0	4.48	356226.18	1028.392316	1121.0	false
PFTeDA_2	713.0 / 169.0	4.48	16794.84	997.386962	607.4	false
NMeFOSAA_1	570.0 / 419.0	3.57	68453.32	1049.070472	662.2	false
NMeFOSAA_2	570.0 / 512.0	3.57	35832.91	998.283502	540.3	false
NEtFOSAA_1	584.0 / 419.0	3.73	68042.07	922.040734	477.4	false
NEtFOSAA_2	584.0 / 483.0	3.73	4148.16	890.344792	4450.9	false

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Summary Quant Report

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Printed: 09/10/2018 2:01:24 PM

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.06	94777.21	250.781173	667.4	false
d3-MeFOSAA	573.0 / 419.0	3.61	15824.70	257.448822	174.9	false
d5-EtFOSAA	589.0 / 419.0	3.77	16691.67	250.471875	268.5	false
13C5-PFHxA	318.0 / 273.0	1.86	64623.54	213.460285	551.2	false
13C4-PFHpA	367.0 / 322.0	2.28	78532.71	228.890405	926.1	false
13C8-PFOA	421.0 / 376.0	2.69	89341.23	219.363629	25485.2	false
13C9-PFNA	472.0 / 427.0	3.09	101923.17	233.795566	1607.1	false
13C6-PFDA	519.0 / 474.0	3.45	95291.86	253.001410	1540.0	false
13C7-PFUnA	570.0 / 525.0	3.77	92564.48	263.752738	891.9	false
13C2-PFTeDA	715.0 / 670.0	4.54	75318.87	239.957460	1630.0	false
13C3-PFBS	302.0 / 99.0	1.54	29931.35	227.789521	501.9	false
13C3-PFHxS	402.0 / 99.0	2.30	24692.80	227.865205	378.1	false
13C8-PFOS	507.0 / 99.0	3.08	30028.15	239.793976	246.4	false

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Summary Quant Report

Sample Name	KB77 CCV	**Injection Vial**	25
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	105770.60	242.789024	1037.1	false
d3-MeFOSAA	573.0 / 419.0	3.57	15846.88	261.126408	186.2	false
d5-EtFOSAA	589.0 / 419.0	3.73	18436.82	280.218582	185.4	false
13C5-PFHxA	318.0 / 273.0	1.84	66358.79	221.113283	571.3	false
13C4-PFHpA	367.0 / 322.0	2.25	74226.50	218.235829	961.1	false
13C8-PFOA	421.0 / 376.0	2.66	93293.51	231.075640	2760.6	false
13C9-PFNA	472.0 / 427.0	3.05	95248.52	220.400027	14761.7	false
13C6-PFDA	519.0 / 474.0	3.41	111512.42	256.840461	812.0	false
13C7-PFUnA	570.0 / 525.0	3.73	97870.49	241.923158	527.4	false
13C2-PFTeDA	715.0 / 670.0	4.48	83461.85	230.670201	1846.3	false
13C3-PFBS	302.0 / 99.0	1.52	30066.09	231.758772	524.5	false
13C3-PFHxS	402.0 / 99.0	2.27	25471.58	238.075870	336.3	false
13C8-PFOS	507.0 / 99.0	3.05	28772.47	232.722603	223.1	false

BATTELLE

Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	98205.37	234.077115	787.6	false
d3-MeFOSAA	573.0 / 419.0	3.57	14833.23	239.339029	179.6	false
d5-EtFOSAA	589.0 / 419.0	3.73	16718.01	248.809209	173.2	false
13C5-PFHxA	318.0 / 273.0	1.84	68399.35	236.836371	746.1	false
13C4-PFHpA	367.0 / 322.0	2.25	71529.13	218.539557	580.9	false
13C8-PFOA	421.0 / 376.0	2.66	99569.08	256.275626	3051.6	false
13C9-PFNA	472.0 / 427.0	3.05	95468.91	229.559597	861.7	false
13C6-PFDA	519.0 / 474.0	3.40	102261.51	244.575005	1481.0	false
13C7-PFUnA	570.0 / 525.0	3.73	98775.66	253.533458	681.0	false
13C2-PFTeDA	715.0 / 670.0	4.48	78186.90	224.386711	1786.6	false
13C3-PFBS	302.0 / 99.0	1.52	29905.01	225.722036	462.7	false
13C3-PFHxS	402.0 / 99.0	2.27	26713.20	244.487287	335.5	false
13C8-PFOS	507.0 / 99.0	3.05	28487.68	225.626062	280.8	false

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Summary Quant Report

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Sample Name	KB77 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.00	108685.53	232.908647	1205.8	false
d3-MeFOSAA	573.0 / 419.0	3.56	17309.86	259.342108	218.5	false
d5-EtFOSAA	589.0 / 419.0	3.72	20336.10	281.029067	192.4	false
13C5-PFHxA	318.0 / 273.0	1.84	77413.77	251.393453	634.9	false
13C4-PFHpA	367.0 / 322.0	2.25	82789.05	237.224398	784.6	false
13C8-PFOA	421.0 / 376.0	2.66	105238.90	254.037851	1153.8	false
13C9-PFNA	472.0 / 427.0	3.05	109549.55	247.049175	1060.5	false
13C6-PFDA	519.0 / 474.0	3.40	108540.11	233.388938	802.2	false
13C7-PFUnA	570.0 / 525.0	3.72	116054.99	267.817718	663.9	false
13C2-PFTeDA	715.0 / 670.0	4.47	86912.52	224.251658	1632.4	false
13C3-PFBS	302.0 / 99.0	1.51	32202.89	225.697409	653.4	false
13C3-PFHxS	402.0 / 99.0	2.27	28204.65	239.691544	354.6	false
13C8-PFOS	507.0 / 99.0	3.05	29418.03	216.345287	223.1	false

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Summary Quant Report

Sample Name	KB76 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:58:51	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	96900.58	233.363251	933.4	false
d3-MeFOSAA	573.0 / 419.0	3.56	14708.37	251.527098	197.5	false
d5-EtFOSAA	589.0 / 419.0	3.72	18916.15	298.371067	222.1	false
13C5-PFHxA	318.0 / 273.0	1.84	63730.73	221.282154	654.8	false
13C4-PFHpA	367.0 / 322.0	2.25	69369.51	212.528307	956.7	false
13C8-PFOA	421.0 / 376.0	2.65	95175.08	245.644522	1800.9	false
13C9-PFNA	472.0 / 427.0	3.05	96151.22	231.840497	1173.9	false
13C6-PFDA	519.0 / 474.0	3.40	103167.52	249.301679	1114.1	false
13C7-PFUnA	570.0 / 525.0	3.72	99960.81	259.237261	715.1	false
13C2-PFTeDA	715.0 / 670.0	4.47	75848.36	219.933663	1360.2	false
13C3-PFBS	302.0 / 99.0	1.52	27856.05	222.839303	511.7	false
13C3-PFHxS	402.0 / 99.0	2.27	24492.34	237.576121	423.4	false
13C8-PFOS	507.0 / 99.0	3.05	27823.93	233.556997	219.6	false

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Summary Ion Ratio Report

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Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	1.88	PFHxA			
PFHxA_2	313.0 / 119.0	1.88	PFHxA	0.080	0.071	ü
PFHpA_1	363.0 / 319.0	2.29	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.31	PFHxS			
PFHxS_2	399.0 / 99.0	2.31	PFHxS	0.280	0.285	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.70	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.10	PFNA			
PFNA_2	463.0 / 219.0	3.10	PFNA	0.300	0.301	ü
PFOS_1	499.0 / 80.0	3.10	PFOS			
PFOS_2	499.0 / 99.0	3.10	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	3.46	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.79	PFUnA			
PFUnA_2	563.0 / 269.0	3.79	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.07	PFDoA			
PFDoA_2	613.0 / 319.0	4.07	PFDoA	0.150	0.159	ü
PFTrDA_1	663.0 / 619.0	4.32	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.32	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.54	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.54	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.61	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.61	NMeFOSAA	0.560	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.78	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.78	NEtFOSAA	0.070	0.065	ü

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Summary Ion Ratio Report

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Sample Name	KB77 CCV	**Injection Vial**	25
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.310	0.301	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.27	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.530	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.060	0.065	ü

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Summary Ion Ratio Report

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Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.310	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.340	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	3.74	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.27	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.57	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.57	NMeFOSAA	0.530	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.060	0.065	ü

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Summary Ion Ratio Report

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Sample Name	KB77 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.021	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	2.67	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.330	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	3.73	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.01	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.26	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.47	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.47	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.57	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.57	NMeFOSAA	0.500	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.070	0.065	ü

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Summary Ion Ratio Report

Created with Analyst Reporter
Printed: 09/10/2018 2:03:15 PM

Sample Name	KB76 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:58:51	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.080	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	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	0.050	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.300	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	3.73	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.26	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.48	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.57	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.57	NMeFOSAA	0.520	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.060	0.065	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	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	29931.35	232.25
PFBS_2	298.9 / 99.0	1.55	13C3-PFBS	302.0 / 99.0	29931.35	232.25
PFHxA_1	313.0 / 269.0	1.88	13C5-PFHxA	318.0 / 273.0	64623.54	250.00
PFHxA_2	313.0 / 119.0	1.88	13C5-PFHxA	318.0 / 273.0	64623.54	250.00
PFHpA_1	363.0 / 319.0	2.29	13C4-PFHpA	367.0 / 322.0	78532.71	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	78532.71	250.00
PFHxS_1	399.0 / 80.0	2.31	13C3-PFHxS	402.0 / 99.0	24557.37	236.50
PFHxS_2	399.0 / 99.0	2.31	13C3-PFHxS	402.0 / 99.0	24557.37	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	89341.23	250.00
PFOA_2	413.0 / 169.0	2.70	13C8-PFOA	421.0 / 376.0	89341.23	250.00
PFNA_1	463.0 / 419.0	3.10	13C9-PFNA	472.0 / 427.0	101923.17	250.00
PFNA_2	463.0 / 219.0	3.10	13C9-PFNA	472.0 / 427.0	101923.17	250.00
PFOS_1	499.0 / 80.0	3.10	13C8-PFOS	507.0 / 99.0	29911.21	239.25
PFOS_2	499.0 / 99.0	3.10	13C8-PFOS	507.0 / 99.0	29911.21	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	95291.86	250.00
PFDA_2	513.0 / 219.0	3.46	13C6-PFDA	519.0 / 474.0	95291.86	250.00
PFUnA_1	563.0 / 519.0	3.79	13C7-PFUnA	570.0 / 525.0	92564.48	250.00
PFUnA_2	563.0 / 269.0	3.79	13C7-PFUnA	570.0 / 525.0	92564.48	250.00
PFDoA_1	613.0 / 569.0	4.07	13C2-PFDoA	615.0 / 570.0	94777.21	250.00
PFDoA_2	613.0 / 319.0	4.07	13C2-PFDoA	615.0 / 570.0	94777.21	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	75318.87	250.00
PFTrDA_2	663.0 / 169.0	4.32	13C2-PFTeDA	715.0 / 670.0	75318.87	250.00
PFTeDA_1	713.0 / 669.0	4.54	13C2-PFTeDA	715.0 / 670.0	75318.87	250.00
PFTeDA_2	713.0 / 169.0	4.54	13C2-PFTeDA	715.0 / 670.0	75318.87	250.00
NMeFOSAA_1	570.0 / 419.0	3.61	d3-MeFOSAA	573.0 / 419.0	16424.82	250.00
NMeFOSAA_2	570.0 / 512.0	3.61	d3-MeFOSAA	573.0 / 419.0	16424.82	250.00
NEtFOSAA_1	584.0 / 419.0	3.78	d5-EtFOSAA	589.0 / 419.0	16839.54	250.00
NEtFOSAA_2	584.0 / 483.0	3.78	d5-EtFOSAA	589.0 / 419.0	16839.54	250.00

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	25
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	30066.09	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	30066.09	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	66358.79	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	66358.79	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	74226.50	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	74226.50	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	25304.04	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	25304.04	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	93293.51	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	93293.51	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	95248.52	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	95248.52	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	29452.59	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	29452.59	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	111512.42	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	111512.42	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	97870.49	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	97870.49	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	105770.60	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	105770.60	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	83461.85	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	83461.85	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	83461.85	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	83461.85	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	15949.80	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	15949.80	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	18641.95	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	18641.95	250.00

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	29905.01	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	29905.01	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	68399.35	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	68399.35	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	71529.13	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	71529.13	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	26394.11	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	26394.11	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	99569.08	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	99569.08	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	95468.91	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	95468.91	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	30452.49	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	30452.49	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	102261.51	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	102261.51	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	98775.66	250.00
PFUnA_2	563.0 / 269.0	3.74	13C7-PFUnA	570.0 / 525.0	98775.66	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	98205.37	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	98205.37	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	78186.90	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	78186.90	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	78186.90	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	78186.90	250.00
NMeFOSAA_1	570.0 / 419.0	3.57	d3-MeFOSAA	573.0 / 419.0	14737.70	250.00
NMeFOSAA_2	570.0 / 512.0	3.57	d3-MeFOSAA	573.0 / 419.0	14737.70	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	16982.49	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	16982.49	250.00

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	32202.89	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	32202.89	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	77413.77	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	77413.77	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	82789.05	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	82789.05	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	27713.84	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	27713.84	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	105238.90	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	105238.90	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	109549.55	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	109549.55	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	28818.82	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	28818.82	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	108540.11	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	108540.11	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	116054.99	250.00
PFUnA_2	563.0 / 269.0	3.73	13C7-PFUnA	570.0 / 525.0	116054.99	250.00
PFDoA_1	613.0 / 569.0	4.01	13C2-PFDoA	615.0 / 570.0	108685.53	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	108685.53	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	86912.52	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	86912.52	250.00
PFTeDA_1	713.0 / 669.0	4.47	13C2-PFTeDA	715.0 / 670.0	86912.52	250.00
PFTeDA_2	713.0 / 169.0	4.47	13C2-PFTeDA	715.0 / 670.0	86912.52	250.00
NMeFOSAA_1	570.0 / 419.0	3.57	d3-MeFOSAA	573.0 / 419.0	17659.62	250.00
NMeFOSAA_2	570.0 / 512.0	3.57	d3-MeFOSAA	573.0 / 419.0	17659.62	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	19388.82	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	19388.82	250.00

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:58:51	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	27856.05	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	27856.05	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	63730.73	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	63730.73	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	69369.51	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	69369.51	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	24720.51	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	24720.51	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	95175.08	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	95175.08	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	96151.22	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	96151.22	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	28662.60	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	28662.60	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	103167.52	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	103167.52	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	99960.81	250.00
PFUnA_2	563.0 / 269.0	3.73	13C7-PFUnA	570.0 / 525.0	99960.81	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	96900.58	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	96900.58	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	75848.36	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	75848.36	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	75848.36	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	75848.36	250.00
NMeFOSAA_1	570.0 / 419.0	3.57	d3-MeFOSAA	573.0 / 419.0	15206.31	250.00
NMeFOSAA_2	570.0 / 512.0	3.57	d3-MeFOSAA	573.0 / 419.0	15206.31	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	18525.87	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	18525.87	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	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.06	13C2-PFDA	515.0 / 470.0	95331.22	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	30554.31	239.25
d5-EtFOSAA	589.0 / 419.0	3.77	13C4-PFOS	503.0 / 99.0	30554.31	239.25
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	95393.87	250.00
13C4-PFHpA	367.0 / 322.0	2.28	13C2-PFOA	415.0 / 370.0	95393.87	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	95393.87	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	95393.87	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	95331.22	250.00
13C7-PFUnA	570.0 / 525.0	3.77	13C2-PFDA	515.0 / 470.0	95331.22	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	95331.22	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	30554.31	239.25
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	30554.31	239.25
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	30554.31	239.25

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	25
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	109891.00	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	30166.21	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30166.21	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	94565.00	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	94565.00	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	94565.00	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	94565.00	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	109891.00	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	109891.00	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	109891.00	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30166.21	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30166.21	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	30166.21	239.25

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	105828.45	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	30807.03	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30807.03	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	91001.88	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	91001.88	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	91001.88	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	91001.88	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	105828.45	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	105828.45	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	105828.45	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30807.03	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30807.03	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	30807.03	239.25

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Summary Internal Standard Report

Sample Name	KB77 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4.00	13C2-PFDA	515.0 / 470.0	117709.72	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	33177.85	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	33177.85	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	97031.12	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	97031.12	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	97031.12	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	97031.12	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	117709.72	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	117709.72	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	117709.72	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	33177.85	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	33177.85	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	33177.85	239.25

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Summary Internal Standard Report

Sample Name	KB76 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:58:51	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	104741.82	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	29067.50	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	29067.50	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	90750.56	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	90750.56	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	90750.56	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	90750.56	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	104741.82	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	104741.82	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	104741.82	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	29067.50	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	29067.50	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	29067.50	239.25

Raw Analytical Data

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Summary Quant Report

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Sample Name	CR892PB-FS(3)	**Injection Vial**	27
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:49:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	1571.96	< 0	13.4	false
PFHxS_2	399.0 / 99.0	2.29	621.28	< 0	12.1	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	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	CR893LCS-FS(3)	**Injection Vial**	28
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:00:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	3063557.53	6786.828452	1363.9	false
PFBS_2	298.9 / 99.0	1.54	897163.50	6722.785076	1016.4	false
PFHxA_1	313.0 / 269.0	1.85	2086587.13	6352.872415	294.1	false
PFHxA_2	313.0 / 119.0	1.85	153890.73	6294.910375	218.3	false
PFHpA_1	363.0 / 319.0	2.26	2102076.63	6733.507364	540.8	false
PFHpA_2	363.0 / 169.0	2.26	42752.58	6836.876032	387.1	false
PFHxS_1	399.0 / 80.0	2.28	2922266.44	6532.601999	951.2	false
PFHxS_2	399.0 / 99.0	2.28	821402.91	6547.456629	1277.2	false
PFOA_1	413.0 / 369.0	2.67	2922100.78	7223.271053	771.6	false
PFOA_2	413.0 / 169.0	2.67	172324.25	6712.302979	606.0	false
PFNA_1	463.0 / 419.0	3.07	2570122.03	6410.048351	900.3	false
PFNA_2	463.0 / 219.0	3.07	826538.51	6767.863312	1454.1	false
PFOS_1	499.0 / 80.0	3.06	4217561.93	7068.486735	432.1	false
PFOS_2	499.0 / 99.0	3.06	758699.01	7280.648444	676.9	false
PFDA_1	513.0 / 469.0	3.42	3107897.22	7297.794084	1022.9	false
PFDA_2	513.0 / 219.0	3.42	132443.78	7224.953226	470.5	false
PFUnA_1	563.0 / 519.0	3.75	3048269.02	6745.500451	783.6	false
PFUnA_2	563.0 / 269.0	3.75	155940.30	6882.894683	444.7	false
PFDoA_1	613.0 / 569.0	4.03	2953371.82	7005.791283	693.9	false
PFDoA_2	613.0 / 319.0	4.03	476520.74	7196.335106	789.8	false
PFTrDA_1	663.0 / 619.0	4.27	2629295.49	6692.203001	988.2	false
PFTrDA_2	663.0 / 169.0	4.27	172767.39	6818.600405	768.0	false
PFTeDA_1	713.0 / 669.0	4.49	3065924.42	6840.053191	1633.1	false
PFTeDA_2	713.0 / 169.0	4.49	144554.52	6672.066176	1522.1	false
NMeFOSAA_1	570.0 / 419.0	3.58	510075.70	6322.442939	1374.0	false
NMeFOSAA_2	570.0 / 512.0	3.58	260275.90	5815.173071	706.5	false
NEtFOSAA_1	584.0 / 419.0	3.74	468199.60	6029.121335	750.9	false
NEtFOSAA_2	584.0 / 483.0	3.74	31588.71	6582.990655	1067.9	false

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Summary Quant Report

Sample Name	J8352-FS(3)	**Injection Vial**	29
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:11:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	164221.64	361.888359	255.8	false
PFBS_2	298.9 / 99.0	1.53	50492.82	366.770013	232.9	false
PFHxA_1	313.0 / 269.0	1.86	4164049.73	13124.083076	448.3	false
PFHxA_2	313.0 / 119.0	1.86	304479.48	12862.375787	321.6	false
PFHpA_1	363.0 / 319.0	2.26	747622.40	2376.882575	381.7	false
PFHpA_2	363.0 / 169.0	2.26	16096.76	2533.783419	385.9	false
PFHxS_1	399.0 / 80.0	2.28	3217254.66	7472.792991	1018.4	false
PFHxS_2	399.0 / 99.0	2.28	910650.46	7543.386122	1448.3	false
PFOA_1	413.0 / 369.0	2.67	881256.03	2544.668735	492.4	false
PFOA_2	413.0 / 169.0	2.67	58580.92	2646.993993	322.2	false
PFNA_1	463.0 / 419.0	3.07	164500.30	561.928568	242.1	false
PFNA_2	463.0 / 219.0	3.07	53145.71	603.000221	239.8	false
PFOS_1	499.0 / 80.0	3.07	58570646.84	130841.899004	1193.1	false
PFOS_2	499.0 / 99.0	3.07	11810696.12	150981.721052	3052.9	false
PFDA_1	513.0 / 469.0	3.42	210530.78	861.084328	283.8	false
PFDA_2	513.0 / 219.0	3.42	9540.51	893.952723	142.4	false
PFUnA_1	563.0 / 519.0	3.74	90632.61	191.150948	146.5	false
PFUnA_2	563.0 / 269.0	3.74	5744.37	202.167107	66.2	false
PFDoA_1	613.0 / 569.0	4.03	42506.06	64.070444	181.2	false
PFDoA_2	613.0 / 319.0	4.03	6492.14	53.750692	104.2	false
PFTrDA_1	663.0 / 619.0	4.27	16583.79	18.272827	147.8	false
PFTrDA_2	663.0 / 169.0	4.22	2113.37	42.055763	56.1	false
PFTeDA_1	713.0 / 669.0	4.49	13755.07	< 0	141.9	false
PFTeDA_2	713.0 / 169.0	4.49	501.65	< 0	62.8	false
NMeFOSAA_1	570.0 / 419.0	3.58	1005.76	< 0	34.4	false
NMeFOSAA_2	570.0 / 512.0	3.58	647.70	1.841346	19.3	false
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8352-FS-D(5)	**Injection Vial**	30
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:22:03	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	8131543.34	15822.765957	894.1	false
PFOS_2	499.0 / 99.0	3.06	1504859.47	16760.840166	1054.1	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	J8353-FS(3)	**Injection Vial**	31
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:32:55	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	294149.47	669.014098	520.4	false
PFBS_2	298.9 / 99.0	1.53	93381.92	709.919701	339.0	false
PFHxA_1	313.0 / 269.0	1.85	1650555.26	4978.101939	240.6	false
PFHxA_2	313.0 / 119.0	1.85	115234.99	4673.864195	196.0	false
PFHpA_1	363.0 / 319.0	2.26	353126.64	1022.828536	249.4	false
PFHpA_2	363.0 / 169.0	2.27	7764.43	1094.741684	155.9	false
PFHxS_1	399.0 / 80.0	2.28	4964398.46	10037.124569	1067.3	false
PFHxS_2	399.0 / 99.0	2.28	1413247.18	10192.623195	1637.7	false
PFOA_1	413.0 / 369.0	2.67	1268603.15	3136.575779	540.2	false
PFOA_2	413.0 / 169.0	2.67	85652.74	3322.822204	376.4	false
PFNA_1	463.0 / 419.0	3.06	355282.90	983.836804	315.7	false
PFNA_2	463.0 / 219.0	3.06	111321.61	1017.240389	346.9	false
PFOS_1	499.0 / 80.0	3.06	64421119.13	116547.123889	1051.6	false
PFOS_2	499.0 / 99.0	3.06	11743019.46	121572.460300	2208.5	false
PFDA_1	513.0 / 469.0	3.42	172909.93	326.046529	232.5	false
PFDA_2	513.0 / 219.0	3.42	8531.35	364.845791	191.4	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.03	10407.43	< 0	82.9	false
PFDoA_2	613.0 / 319.0	4.02	1360.93	< 0	54.1	false
PFTrDA_1	663.0 / 619.0	4.22	5805.32	< 0	87.8	false
PFTrDA_2	663.0 / 169.0	4.20	1540.26	19.058254	67.7	false
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8353-FS-D(5)	**Injection Vial**	32
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:43:46	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	7677262.83	14929.933221	707.6	false
PFOS_2	499.0 / 99.0	3.06	1385052.87	15417.417720	1071.7	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	J8354-FS(3)	**Injection Vial**	33
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:54:37	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	508586.18	1142.937793	536.3	false
PFBS_2	298.9 / 99.0	1.53	157452.93	1188.732986	431.5	false
PFHxA_1	313.0 / 269.0	1.85	1621638.57	4975.223664	215.6	false
PFHxA_2	313.0 / 119.0	1.85	108604.36	4479.803360	177.9	false
PFHpA_1	363.0 / 319.0	2.26	203617.35	595.771133	177.8	false
PFHpA_2	363.0 / 169.0	2.26	4978.08	701.596134	153.0	false
PFHxS_1	399.0 / 80.0	2.28	2238957.35	5085.679661	673.8	false
PFHxS_2	399.0 / 99.0	2.28	642972.27	5206.501948	1271.5	false
PFOA_1	413.0 / 369.0	2.67	914602.46	2461.974237	465.5	false
PFOA_2	413.0 / 169.0	2.67	61680.90	2598.079354	322.1	false
PFNA_1	463.0 / 419.0	3.07	34225.98	83.440374	91.9	false
PFNA_2	463.0 / 219.0	3.07	12688.03	115.656854	130.0	false
PFOS_1	499.0 / 80.0	3.07	61044506.95	136881.307297	1104.0	false
PFOS_2	499.0 / 99.0	3.07	13283438.57	170447.464294	3696.5	false
PFDA_1	513.0 / 469.0	3.43	156499.23	593.954372	222.1	false
PFDA_2	513.0 / 219.0	3.42	7493.67	650.733932	135.4	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	15350.42	< 0	109.7	false
PFDoA_2	613.0 / 319.0	3.58	2686.28	< 0	39.1	false
PFTrDA_1	663.0 / 619.0	4.20	12840.21	10.823768	131.1	false
PFTrDA_2	663.0 / 169.0	4.20	5027.84	171.256302	222.7	false
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8354-FS-D(5)	**Injection Vial**	34
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:05:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	7840574.95	14004.207569	928.1	false
PFOS_2	499.0 / 99.0	3.07	1561560.23	15965.696152	1164.2	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	J8355-FS(3)	**Injection Vial**	35
Sample ID	VC-PM323-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:16:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	10194.13	6.835899	68.8	false
PFBS_2	298.9 / 99.0	1.53	4160.85	4.822636	52.5	false
PFHxA_1	313.0 / 269.0	1.85	25374.58	28.652795	17.2	false
PFHxA_2	313.0 / 119.0	1.86	1637.27	46.535823	12.6	false
PFHpA_1	363.0 / 319.0	2.26	16555.41	18.396180	34.8	false
PFHpA_2	363.0 / 169.0	2.24	191.55	< 0	10.8	false
PFHxS_1	399.0 / 80.0	2.28	438613.32	979.176369	462.5	false
PFHxS_2	399.0 / 99.0	2.28	120911.26	956.189133	702.0	false
PFOA_1	413.0 / 369.0	2.67	24411.28	23.316079	66.7	false
PFOA_2	413.0 / 169.0	2.67	2426.38	20.896716	59.0	false
PFNA_1	463.0 / 419.0	3.07	6465.10	< 0	26.2	false
PFNA_2	463.0 / 219.0	3.05	1486.04	< 0	28.2	false
PFOS_1	499.0 / 80.0	3.07	5307342.71	8273.594938	670.4	false
PFOS_2	499.0 / 99.0	3.07	969800.93	8655.665817	1039.5	false
PFDA_1	513.0 / 469.0	3.43	8193.81	< 0	44.0	false
PFDA_2	513.0 / 219.0	3.36	532.44	< 0	12.5	false
PFUnA_1	563.0 / 519.0	3.74	10903.23	16.406077	66.4	false
PFUnA_2	563.0 / 269.0	3.74	848.53	< 0	18.5	true
PFDoA_1	613.0 / 569.0	4.03	9918.79	< 0	96.6	false
PFDoA_2	613.0 / 319.0	4.03	1796.18	< 0	53.9	false
PFTrDA_1	663.0 / 619.0	4.27	2758.64	< 0	63.8	false
PFTrDA_2	663.0 / 169.0	4.19	210.15	< 0	11.8	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	J8356-FS(3)	**Injection Vial**	36
Sample ID	VC-PM323-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:27:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	9051.96	5.352330	61.2	false
PFBS_2	298.9 / 99.0	1.53	2984.66	< 0	42.9	true
PFHxA_1	313.0 / 269.0	1.85	22896.35	12.542970	16.0	false
PFHxA_2	313.0 / 119.0	1.86	1100.93	17.461695	10.4	true
PFHpA_1	363.0 / 319.0	2.26	17187.60	14.830327	34.1	false
PFHpA_2	363.0 / 169.0	2.26	623.76	19.649472	32.2	true
PFHxS_1	399.0 / 80.0	2.28	467590.66	1061.448508	390.2	false
PFHxS_2	399.0 / 99.0	2.28	136203.02	1097.005175	671.5	false
PFOA_1	413.0 / 369.0	2.67	55674.64	94.933769	97.2	false
PFOA_2	413.0 / 169.0	2.67	4420.63	93.035368	77.5	false
PFNA_1	463.0 / 419.0	3.06	5811.64	< 0	29.7	false
PFNA_2	463.0 / 219.0	3.06	1547.92	< 0	27.8	false
PFOS_1	499.0 / 80.0	3.01	4608690.18	7031.430839	340.6	false
PFOS_2	499.0 / 99.0	3.06	636459.74	5558.662477	512.6	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	4.02	2088.93	< 0	28.9	false
PFDoA_2	613.0 / 319.0	4.04	498.45	< 0	19.4	false
PFTrDA_1	663.0 / 619.0	4.27	1459.32	< 0	40.1	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8357-FS(3)	**Injection Vial**	39
Sample ID	VC-PM323-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:59:44	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	11225.24	11.335978	60.0	false
PFBS_2	298.9 / 99.0	1.53	4340.55	9.029361	47.3	false
PFHxA_1	313.0 / 269.0	1.85	37015.15	65.489953	20.9	false
PFHxA_2	313.0 / 119.0	1.85	2501.73	83.318699	15.9	false
PFHpA_1	363.0 / 319.0	2.26	17876.30	23.151414	34.7	false
PFHpA_2	363.0 / 169.0	2.26	719.38	46.789008	38.4	false
PFHxS_1	399.0 / 80.0	2.28	625332.47	1317.160351	445.1	false
PFHxS_2	399.0 / 99.0	2.28	179954.02	1346.218122	616.5	false
PFOA_1	413.0 / 369.0	2.66	36699.85	56.538258	83.7	false
PFOA_2	413.0 / 169.0	2.63	3242.73	57.492285	33.0	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	527548.65	896.843921	197.8	false
PFOS_2	499.0 / 99.0	3.06	86727.29	847.319801	269.0	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	J8360-FS(3)	**Injection Vial**	40
Sample ID	VC-PM324-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:10:35	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	2671.37	< 0	23.7	true
PFBS_2	298.9 / 99.0	1.52	820.03	< 0	20.7	true
PFHxA_1	313.0 / 269.0	1.85	20535.10	8.020281	13.7	false
PFHxA_2	313.0 / 119.0	1.84	1350.88	29.818292	10.7	false
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	10333.77	10.209032	43.4	false
PFHxS_2	399.0 / 99.0	2.28	3125.19	4.832653	33.9	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	3.06	67698.33	88.937507	85.6	false
PFOS_2	499.0 / 99.0	3.06	12257.98	96.742762	150.3	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	J8361-FS(3)	**Injection Vial**	41
Sample ID	VC-PM324-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:21:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	2513.59	< 0	19.9	true
PFBS_2	298.9 / 99.0	1.51	1137.44	< 0	22.7	true
PFHxA_1	313.0 / 269.0	1.84	24567.02	14.556616	16.6	false
PFHxA_2	313.0 / 119.0	1.85	2065.17	52.929904	14.0	false
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	9975.33	8.616494	39.8	false
PFHxS_2	399.0 / 99.0	2.28	3030.53	3.215406	25.7	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	3.06	46912.99	61.140818	65.4	false
PFOS_2	499.0 / 99.0	3.06	9677.88	78.205088	101.3	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	J8362-FS(3)	**Injection Vial**	42
Sample ID	VC-PM324-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:32:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	3058.67	< 0	24.1	true
PFBS_2	298.9 / 99.0	1.51	2054.68	< 0	35.3	true
PFHxA_1	313.0 / 269.0	1.85	23519.79	20.097080	15.9	false
PFHxA_2	313.0 / 119.0	1.83	887.99	11.744309	8.5	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	19191.66	35.786761	91.7	false
PFHxS_2	399.0 / 99.0	2.28	6249.19	36.410873	70.4	false
PFOA_1	413.0 / 369.0	2.66	14861.51	0.860382	48.7	false
PFOA_2	413.0 / 169.0	2.66	1365.00	< 0	19.5	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	3.06	58842.77	89.966795	90.4	false
PFOS_2	499.0 / 99.0	3.06	11147.32	102.597700	125.0	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

Sample Name	J8363-FS(3)	**Injection Vial**	43
Sample ID	VC-PM324-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:43:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	32829.79	57.749085	117.5	false
PFBS_2	298.9 / 99.0	1.53	10510.24	53.127403	90.6	false
PFHxA_1	313.0 / 269.0	1.85	208080.65	648.656589	61.9	false
PFHxA_2	313.0 / 119.0	1.85	14939.81	650.151032	53.7	false
PFHpA_1	363.0 / 319.0	2.26	21097.31	33.247498	39.0	false
PFHpA_2	363.0 / 169.0	2.24	378.40	< 0	17.7	false
PFHxS_1	399.0 / 80.0	2.28	170341.26	341.789857	193.2	false
PFHxS_2	399.0 / 99.0	2.28	47385.64	332.159863	282.8	false
PFOA_1	413.0 / 369.0	2.66	32833.70	40.904173	74.3	false
PFOA_2	413.0 / 169.0	2.66	2693.83	28.172695	54.8	false
PFNA_1	463.0 / 419.0	3.06	19920.48	11.422393	61.7	false
PFNA_2	463.0 / 219.0	3.06	6308.96	18.614283	100.9	false
PFOS_1	499.0 / 80.0	3.06	5081460.29	7918.216084	1023.5	false
PFOS_2	499.0 / 99.0	3.06	1003535.27	8953.754680	1440.4	false
PFDA_1	513.0 / 469.0	3.42	29653.19	9.948472	106.9	false
PFDA_2	513.0 / 219.0	3.46	803.17	< 0	19.1	false
PFUnA_1	563.0 / 519.0	3.74	13872.18	18.880271	56.6	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	14422.70	< 0	104.4	false
PFDoA_2	613.0 / 319.0	4.03	2250.45	< 0	84.8	false
PFTrDA_1	663.0 / 619.0	4.26	3940.64	< 0	98.9	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

Sample Name	J8364-FS(3)	**Injection Vial**	44
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:54:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	8068.93	2.330401	56.0	true
PFBS_2	298.9 / 99.0	1.53	4037.62	4.433930	60.1	true
PFHxA_1	313.0 / 269.0	1.85	100318.70	234.058038	44.5	false
PFHxA_2	313.0 / 119.0	1.85	7287.80	255.344592	23.4	false
PFHpA_1	363.0 / 319.0	2.25	23577.05	35.756557	43.9	false
PFHpA_2	363.0 / 169.0	2.26	774.54	45.161296	29.2	false
PFHxS_1	399.0 / 80.0	2.28	260102.10	523.934014	297.1	false
PFHxS_2	399.0 / 99.0	2.28	77496.05	550.846922	323.2	false
PFOA_1	413.0 / 369.0	2.66	76903.44	127.684301	128.5	false
PFOA_2	413.0 / 169.0	2.66	4646.82	85.807810	83.7	false
PFNA_1	463.0 / 419.0	3.06	57622.21	107.671745	130.0	false
PFNA_2	463.0 / 219.0	3.06	19752.61	131.399358	212.2	false
PFOS_1	499.0 / 80.0	3.06	21860006.19	34364.568638	1865.7	false
PFOS_2	499.0 / 99.0	3.06	4212211.54	37896.272654	2805.5	false
PFDA_1	513.0 / 469.0	3.41	45864.39	35.137044	167.3	false
PFDA_2	513.0 / 219.0	3.42	2470.78	39.932034	68.7	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	4.02	6932.10	< 0	62.2	false
PFDoA_2	613.0 / 319.0	4.03	918.41	< 0	49.8	false
PFTrDA_1	663.0 / 619.0	4.26	1783.91	< 0	44.6	false
PFTrDA_2	663.0 / 169.0	4.19	301.60	< 0	16.4	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	J8364-FS-D(5)	**Injection Vial**	45
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:04:56	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4800778.77	8228.704039	1032.6	false
PFOS_2	499.0 / 99.0	3.06	931964.49	9146.145534	1497.7	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

Sample Name	J8365-FS(3)	**Injection Vial**	46
Sample ID	VC-PM324-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:15:48	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	8808.73	3.288416	55.3	false
PFBS_2	298.9 / 99.0	1.52	3540.99	< 0	55.8	false
PFHxA_1	313.0 / 269.0	1.84	34744.80	49.254823	21.1	false
PFHxA_2	313.0 / 119.0	1.86	2757.36	85.290274	17.4	false
PFHpA_1	363.0 / 319.0	2.25	10389.06	< 0	27.9	false
PFHpA_2	363.0 / 169.0	2.29	255.47	< 0	11.7	true
PFHxS_1	399.0 / 80.0	2.28	101510.94	183.524209	179.9	false
PFHxS_2	399.0 / 99.0	2.28	30300.21	189.186949	205.9	false
PFOA_1	413.0 / 369.0	2.66	28641.64	22.964804	66.3	false
PFOA_2	413.0 / 169.0	2.65	1452.22	< 0	22.7	false
PFNA_1	463.0 / 419.0	3.06	2138.15	< 0	14.7	false
PFNA_2	463.0 / 219.0	3.08	699.01	< 0	12.2	false
PFOS_1	499.0 / 80.0	3.06	491209.48	672.483975	247.2	false
PFOS_2	499.0 / 99.0	3.06	85808.77	676.451673	377.2	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	J8366MS-FS(3)	**Injection Vial**	47
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:26:41	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	6876361.34	14053.087099	2431.0	false
PFBS_2	298.9 / 99.0	1.53	2060044.20	14253.238356	1651.1	false
PFHxA_1	313.0 / 269.0	1.85	4962103.71	15082.627729	403.6	false
PFHxA_2	313.0 / 119.0	1.85	355604.33	14482.652793	266.7	false
PFHpA_1	363.0 / 319.0	2.26	4163307.49	13172.105783	611.9	false
PFHpA_2	363.0 / 169.0	2.26	87758.26	13901.020210	617.5	false
PFHxS_1	399.0 / 80.0	2.28	6531763.27	14043.650366	787.2	false
PFHxS_2	399.0 / 99.0	2.28	1806613.61	13858.218462	906.5	false
PFOA_1	413.0 / 369.0	2.66	6194874.22	15227.923479	1440.3	false
PFOA_2	413.0 / 169.0	2.66	376138.05	14613.882349	1156.2	false
PFNA_1	463.0 / 419.0	3.06	4940473.87	12945.482758	1148.7	false
PFNA_2	463.0 / 219.0	3.06	1589855.10	13669.361532	1279.1	false
PFOS_1	499.0 / 80.0	3.06	27586887.70	48742.829132	1248.8	false
PFOS_2	499.0 / 99.0	3.06	5258417.85	53170.476788	1561.7	false
PFDA_1	513.0 / 469.0	3.42	6630656.09	15116.317640	872.2	false
PFDA_2	513.0 / 219.0	3.42	272514.05	14449.313990	880.1	false
PFUnA_1	563.0 / 519.0	3.74	6877019.73	13819.581861	788.7	false
PFUnA_2	563.0 / 269.0	3.74	329141.80	13231.193512	625.7	false
PFDoA_1	613.0 / 569.0	4.02	6455435.54	13139.143129	786.1	false
PFDoA_2	613.0 / 319.0	4.02	1025006.05	13286.555556	676.6	false
PFTrDA_1	663.0 / 619.0	4.26	5849425.79	13658.890530	1376.6	false
PFTrDA_2	663.0 / 169.0	4.26	368406.12	13354.904831	917.6	false
PFTeDA_1	713.0 / 669.0	4.48	6668526.39	13662.521553	2036.1	false
PFTeDA_2	713.0 / 169.0	4.48	315592.64	13383.877645	1680.3	false
NMeFOSAA_1	570.0 / 419.0	3.57	1092481.95	11975.816007	1528.5	false
NMeFOSAA_2	570.0 / 512.0	3.57	578741.68	11427.477996	1260.6	false
NEtFOSAA_1	584.0 / 419.0	3.73	1008648.59	12440.611130	884.5	false
NEtFOSAA_2	584.0 / 483.0	3.73	63852.18	12768.068074	711.1	false

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Summary Quant Report

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Sample Name	J8366MS-FS-D(5)	**Injection Vial**	48
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:37:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	true
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	2.66	1314848.51	3544.024101	543.8	false
PFOA_2	413.0 / 169.0	2.66	79304.88	3350.447271	409.0	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	3.05	6031656.16	12256.642564	890.5	false
PFOS_2	499.0 / 99.0	3.05	1133649.19	13186.918635	1135.4	false
PFDA_1	513.0 / 469.0	3.41	1411598.48	3717.875807	756.4	false
PFDA_2	513.0 / 219.0	N/A	N/A	N/A	N/A	true
PFUnA_1	563.0 / 519.0	3.73	1389212.70	3455.639284	481.8	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	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	J8367MSD-FS(3)	**Injection Vial**	51
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:10:07	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	6714423.75	13881.576015	2249.2	false
PFBS_2	298.9 / 99.0	1.53	1952674.19	13666.409218	1265.8	false
PFHxA_1	313.0 / 269.0	1.85	4531713.05	14079.867838	433.4	false
PFHxA_2	313.0 / 119.0	1.85	332825.28	13858.027819	264.0	false
PFHpA_1	363.0 / 319.0	2.25	4305449.50	13397.632615	741.0	false
PFHpA_2	363.0 / 169.0	2.25	83793.87	13049.400985	535.7	false
PFHxS_1	399.0 / 80.0	2.27	6346209.03	13604.219285	759.4	false
PFHxS_2	399.0 / 99.0	2.27	1764307.28	13493.413176	1090.9	false
PFOA_1	413.0 / 369.0	2.66	6130525.95	16304.095480	1424.5	false
PFOA_2	413.0 / 169.0	2.66	354014.21	14880.012563	990.2	false
PFNA_1	463.0 / 419.0	3.05	5004864.10	13921.199238	1313.9	false
PFNA_2	463.0 / 219.0	3.05	1535853.58	14015.396797	1342.0	false
PFOS_1	499.0 / 80.0	3.05	24976208.53	44210.258756	1187.2	false
PFOS_2	499.0 / 99.0	3.05	4724422.13	47858.224350	1218.9	false
PFDA_1	513.0 / 469.0	3.41	6286848.07	15254.522968	879.7	false
PFDA_2	513.0 / 219.0	3.41	275291.09	15540.431285	714.9	false
PFUnA_1	563.0 / 519.0	3.73	6669310.47	13596.577489	799.2	false
PFUnA_2	563.0 / 269.0	3.73	318816.12	13001.250398	610.3	false
PFDoA_1	613.0 / 569.0	4.02	6219893.89	14074.567017	853.6	false
PFDoA_2	613.0 / 319.0	4.01	964913.12	13904.817879	825.8	false
PFTrDA_1	663.0 / 619.0	4.26	5513343.17	13694.493188	1211.2	false
PFTrDA_2	663.0 / 169.0	4.26	360277.75	13894.124606	992.1	false
PFTeDA_1	713.0 / 669.0	4.48	6072246.82	13232.350391	1779.9	false
PFTeDA_2	713.0 / 169.0	4.48	294660.19	13292.090839	1421.4	false
NMeFOSAA_1	570.0 / 419.0	3.56	1022488.63	12548.055638	1075.9	false
NMeFOSAA_2	570.0 / 512.0	3.56	546879.44	12088.500320	1167.7	false
NEtFOSAA_1	584.0 / 419.0	3.73	1007283.58	14494.602009	863.5	false
NEtFOSAA_2	584.0 / 483.0	3.73	62405.71	14562.283903	1051.0	false

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Summary Quant Report

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Sample Name	J8367MSD-FS-D(5)	**Injection Vial**	52
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:20:59	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
PFBS_1	298.9 / 80.0	N/A	N/A	N/A	N/A	true
PFBS_2	298.9 / 99.0	N/A	N/A	N/A	N/A	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	N/A	N/A	N/A	N/A	true
PFHxS_2	399.0 / 99.0	N/A	N/A	N/A	N/A	true
PFOA_1	413.0 / 369.0	2.66	1289030.02	3660.848525	731.5	false
PFOA_2	413.0 / 169.0	2.66	74972.06	3336.055517	466.4	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	3.05	5940267.16	10357.860051	797.9	false
PFOS_2	499.0 / 99.0	3.05	1138451.17	11364.296818	1124.7	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	3.73	1358030.21	3341.518415	487.3	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	N/A	N/A	N/A	N/A	true
PFDoA_2	613.0 / 319.0	N/A	N/A	N/A	N/A	true
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	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	J8373-FS(3)	**Injection Vial**	53
Sample ID	VC-PM64B-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:31:50	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4450.01	< 0	35.2	true
PFBS_2	298.9 / 99.0	1.53	2408.01	< 0	32.5	true
PFHxA_1	313.0 / 269.0	1.85	13077.60	< 0	10.5	false
PFHxA_2	313.0 / 119.0	1.84	664.38	1.277803	5.5	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	32137.14	53.742446	99.2	false
PFHxS_2	399.0 / 99.0	2.27	9619.42	51.099773	100.3	false
PFOA_1	413.0 / 369.0	2.66	9681.07	< 0	34.0	true
PFOA_2	413.0 / 169.0	2.68	422.22	< 0	14.3	false
PFNA_1	463.0 / 419.0	3.06	4644.77	< 0	24.4	false
PFNA_2	463.0 / 219.0	3.07	1440.20	< 0	24.3	false
PFOS_1	499.0 / 80.0	3.06	318199.51	466.463623	196.9	false
PFOS_2	499.0 / 99.0	3.06	60086.15	509.067899	329.1	false
PFDA_1	513.0 / 469.0	3.42	10640.93	< 0	58.0	false
PFDA_2	513.0 / 219.0	3.40	597.41	< 0	20.5	false
PFUnA_1	563.0 / 519.0	3.73	8784.03	9.897940	44.8	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	10317.28	< 0	84.0	false
PFDoA_2	613.0 / 319.0	4.02	1668.58	< 0	54.2	false
PFTrDA_1	663.0 / 619.0	4.27	4257.84	< 0	108.1	false
PFTrDA_2	663.0 / 169.0	4.26	302.76	< 0	14.0	false
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

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Summary Quant Report

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Sample Name	J8374-FS(3)	**Injection Vial**	54
Sample ID	VC-PM64B-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:42:42	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	1891.37	< 0	18.5	true
PFBS_2	298.9 / 99.0	1.50	1170.72	< 0	17.2	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	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	22788.21	42.950764	76.1	false
PFHxS_2	399.0 / 99.0	2.27	5601.90	29.053402	82.3	false
PFOA_1	413.0 / 369.0	2.66	7453.05	< 0	24.4	false
PFOA_2	413.0 / 169.0	2.64	231.04	< 0	9.4	true
PFNA_1	463.0 / 419.0	3.07	3986.73	< 0	22.3	false
PFNA_2	463.0 / 219.0	3.06	1700.43	< 0	28.5	false
PFOS_1	499.0 / 80.0	3.06	1409444.62	2262.287837	564.4	false
PFOS_2	499.0 / 99.0	3.06	268884.76	2474.774291	898.6	false
PFDA_1	513.0 / 469.0	3.41	9183.21	< 0	46.9	false
PFDA_2	513.0 / 219.0	3.42	333.47	< 0	11.4	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	4.02	3232.06	< 0	43.5	false
PFDoA_2	613.0 / 319.0	4.03	593.60	< 0	21.1	false
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	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	J8375-FS(3)	**Injection Vial**	1
Sample ID	VC-PM64B-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:53:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	2.27	36181.08	61.020132	63.6	false
PFHxS_2	399.0 / 99.0	2.27	11109.85	60.895995	132.0	false
PFOA_1	413.0 / 369.0	2.66	5142.06	< 0	18.8	false
PFOA_2	413.0 / 169.0	2.56	194.69	< 0	6.8	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	3.06	98786.07	120.665789	101.9	false
PFOS_2	499.0 / 99.0	3.05	15222.92	109.459920	116.7	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	J8376-FS(3)	**Injection Vial**	2
Sample ID	VC-PM64B-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:04:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	62746.21	118.729868	145.8	false
PFBS_2	298.9 / 99.0	1.52	18565.25	108.164527	140.9	false
PFHxA_1	313.0 / 269.0	1.84	142339.41	403.713213	51.9	false
PFHxA_2	313.0 / 119.0	1.84	7750.34	308.186127	39.8	false
PFHpA_1	363.0 / 319.0	2.25	68996.18	184.662955	81.5	false
PFHpA_2	363.0 / 169.0	2.25	1801.03	215.531422	68.8	false
PFHxS_1	399.0 / 80.0	2.27	309327.60	564.845250	200.8	false
PFHxS_2	399.0 / 99.0	2.27	82305.53	528.729534	271.7	false
PFOA_1	413.0 / 369.0	2.66	154658.28	317.283140	211.4	false
PFOA_2	413.0 / 169.0	2.66	11168.91	332.853894	167.3	false
PFNA_1	463.0 / 419.0	3.06	42630.15	65.761604	118.7	false
PFNA_2	463.0 / 219.0	3.06	12687.63	68.298723	131.7	false
PFOS_1	499.0 / 80.0	3.06	2281838.87	3231.696174	548.3	false
PFOS_2	499.0 / 99.0	3.06	430594.48	3494.659463	822.2	false
PFDA_1	513.0 / 469.0	3.41	53706.45	61.176673	171.8	false
PFDA_2	513.0 / 219.0	3.41	3068.21	81.323748	124.6	false
PFUnA_1	563.0 / 519.0	3.73	19221.51	31.978240	83.9	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	33360.01	31.625948	157.5	false
PFDoA_2	613.0 / 319.0	4.01	5467.01	27.323972	95.4	false
PFTrDA_1	663.0 / 619.0	4.26	9165.82	< 0	187.0	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.73	4867.59	62.798788	130.6	false
NEtFOSAA_2	584.0 / 483.0	3.73	289.32	38.250484	15.8	false

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Summary Quant Report

Sample Name	J8377-FS(3)	**Injection Vial**	3
Sample ID	VC-PM64B-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:15:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	35292.44	58.865438	108.3	false
PFBS_2	298.9 / 99.0	1.52	10519.06	48.708168	120.0	true
PFHxA_1	313.0 / 269.0	1.84	95075.43	250.981685	40.0	false
PFHxA_2	313.0 / 119.0	1.84	6335.27	247.066195	32.1	false
PFHpA_1	363.0 / 319.0	2.25	56262.78	137.481697	69.7	false
PFHpA_2	363.0 / 169.0	2.25	1298.63	127.207652	58.1	false
PFHxS_1	399.0 / 80.0	2.27	208256.27	412.203082	245.0	false
PFHxS_2	399.0 / 99.0	2.27	61730.90	429.703185	373.1	false
PFOA_1	413.0 / 369.0	2.66	109169.40	220.694880	165.3	false
PFOA_2	413.0 / 169.0	2.66	6783.32	181.747507	105.5	false
PFNA_1	463.0 / 419.0	3.05	51198.98	106.075932	119.1	false
PFNA_2	463.0 / 219.0	3.05	13309.59	89.339879	130.4	false
PFOS_1	499.0 / 80.0	3.05	1928501.93	2929.485304	464.9	false
PFOS_2	499.0 / 99.0	3.05	388060.41	3378.894825	772.4	false
PFDA_1	513.0 / 469.0	3.41	96824.86	165.363569	206.5	false
PFDA_2	513.0 / 219.0	3.41	4296.43	154.853689	100.0	false
PFUnA_1	563.0 / 519.0	3.73	18642.67	47.996509	73.6	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.01	41337.46	69.516295	148.2	false
PFDoA_2	613.0 / 319.0	4.01	6440.44	61.208207	120.2	false
PFTrDA_1	663.0 / 619.0	4.26	11534.30	4.722012	157.6	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.73	2073.85	50.655013	77.5	true
NEtFOSAA_2	584.0 / 483.0	3.73	220.57	57.308912	13.6	true

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Summary Quant Report

Sample Name	J8378-FS(3)	**Injection Vial**	4
Sample ID	VC-PM64B-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:26:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	26501.66	37.950098	60.5	false
PFBS_2	298.9 / 99.0	1.53	7618.63	25.641069	72.0	false
PFHxA_1	313.0 / 269.0	1.84	37183.50	87.979367	24.2	false
PFHxA_2	313.0 / 119.0	1.84	2301.67	92.662500	13.5	false
PFHpA_1	363.0 / 319.0	2.25	14578.12	13.003490	32.4	false
PFHpA_2	363.0 / 169.0	2.26	341.29	< 0	11.7	false
PFHxS_1	399.0 / 80.0	2.28	715226.02	1465.843618	254.3	false
PFHxS_2	399.0 / 99.0	2.28	198016.58	1441.368940	531.5	false
PFOA_1	413.0 / 369.0	2.66	63286.91	110.392664	111.1	false
PFOA_2	413.0 / 169.0	2.62	4572.21	96.183423	61.3	true
PFNA_1	463.0 / 419.0	3.06	6711.92	< 0	34.9	false
PFNA_2	463.0 / 219.0	3.05	1703.18	< 0	27.6	false
PFOS_1	499.0 / 80.0	3.00	5178858.71	7626.581870	381.6	false
PFOS_2	499.0 / 99.0	3.06	788110.11	6644.173741	639.1	true
PFDA_1	513.0 / 469.0	3.41	7021.60	< 0	36.3	false
PFDA_2	513.0 / 219.0	3.42	362.03	< 0	12.6	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	4.01	3478.21	< 0	39.1	false
PFDoA_2	613.0 / 319.0	4.01	403.50	< 0	19.8	false
PFTrDA_1	663.0 / 619.0	N/A	N/A	N/A	N/A	true
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	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	J8379-FS(3)	**Injection Vial**	5
Sample ID	VC-PM64B-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:37:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	10071.18	8.033565	55.2	false
PFBS_2	298.9 / 99.0	1.52	2847.81	< 0	44.9	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.28	61223.97	128.558463	138.3	false
PFHxS_2	399.0 / 99.0	2.28	17766.71	126.453032	199.9	false
PFOA_1	413.0 / 369.0	2.66	17742.96	11.997408	51.5	false
PFOA_2	413.0 / 169.0	2.67	1544.47	< 0	30.5	true
PFNA_1	463.0 / 419.0	3.06	8326.99	< 0	38.5	false
PFNA_2	463.0 / 219.0	3.06	3115.32	< 0	43.8	false
PFOS_1	499.0 / 80.0	3.06	704094.33	1183.781554	404.1	false
PFOS_2	499.0 / 99.0	3.06	136253.04	1316.150820	529.8	false
PFDA_1	513.0 / 469.0	3.41	17720.10	< 0	75.4	false
PFDA_2	513.0 / 219.0	3.42	2118.65	37.750143	67.9	true
PFUnA_1	563.0 / 519.0	3.74	8211.70	10.032064	39.9	false
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	13156.87	< 0	85.6	false
PFDoA_2	613.0 / 319.0	4.02	1231.94	< 0	40.6	false
PFTrDA_1	663.0 / 619.0	4.26	3790.35	< 0	79.5	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.73	1255.53	27.044846	83.0	false
NEtFOSAA_2	584.0 / 483.0	3.72	364.41	66.640414	36.2	true

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Summary Quant Report

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Sample Name	J8380-FS(3)	**Injection Vial**	6
Sample ID	VC-PM64B-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:47:58	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	36649.85	68.014601	136.1	false
PFBS_2	298.9 / 99.0	1.53	12819.54	72.735749	130.5	false
PFHxA_1	313.0 / 269.0	1.84	49377.84	102.161218	28.2	false
PFHxA_2	313.0 / 119.0	1.85	2461.44	78.837196	16.2	false
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	129203.67	288.170508	176.4	false
PFHxS_2	399.0 / 99.0	2.28	36527.99	283.777810	295.0	false
PFOA_1	413.0 / 369.0	2.66	46187.47	74.519585	86.8	false
PFOA_2	413.0 / 169.0	2.66	3126.18	47.320728	58.4	false
PFNA_1	463.0 / 419.0	3.06	21637.87	11.912688	61.6	false
PFNA_2	463.0 / 219.0	3.05	5382.27	7.075168	81.2	false
PFOS_1	499.0 / 80.0	3.06	1182200.69	1695.585574	384.8	false
PFOS_2	499.0 / 99.0	3.05	215417.82	1772.632016	536.7	false
PFDA_1	513.0 / 469.0	3.41	10108.13	< 0	61.0	false
PFDA_2	513.0 / 219.0	3.42	454.37	< 0	18.0	true
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.02	4347.51	< 0	44.9	false
PFDoA_2	613.0 / 319.0	4.02	571.48	< 0	28.1	false
PFTrDA_1	663.0 / 619.0	4.25	2043.25	< 0	55.1	false
PFTrDA_2	663.0 / 169.0	N/A	N/A	N/A	N/A	true
PFTeDA_1	713.0 / 669.0	N/A	N/A	N/A	N/A	true
PFTeDA_2	713.0 / 169.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	3.73	792.93	20.895421	43.9	true
NEtFOSAA_2	584.0 / 483.0	3.72	84.50	5.937056	47.3	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	2018-10-08T16:56:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4650.27	< 0	35.7	true
PFBS_2	298.9 / 99.0	1.54	1543.16	< 0	27.0	true
PFHxA_1	313.0 / 269.0	N/A	N/A	N/A	N/A	true
PFHxA_2	313.0 / 119.0	N/A	N/A	N/A	N/A	true
PFHpA_1	363.0 / 319.0	N/A	N/A	N/A	N/A	true
PFHpA_2	363.0 / 169.0	N/A	N/A	N/A	N/A	true
PFHxS_1	399.0 / 80.0	2.32	6241.38	6.137052	20.8	false
PFHxS_2	399.0 / 99.0	2.32	1296.56	< 0	20.2	false
PFOA_1	413.0 / 369.0	2.70	7733.59	< 0	20.4	false
PFOA_2	413.0 / 169.0	2.70	663.55	< 0	19.9	false
PFNA_1	463.0 / 419.0	3.10	6565.33	< 0	34.0	false
PFNA_2	463.0 / 219.0	3.10	2301.01	< 0	34.7	false
PFOS_1	499.0 / 80.0	N/A	N/A	N/A	N/A	true
PFOS_2	499.0 / 99.0	N/A	N/A	N/A	N/A	true
PFDA_1	513.0 / 469.0	3.46	5592.88	< 0	35.0	false
PFDA_2	513.0 / 219.0	3.48	592.26	< 0	17.9	false
PFUnA_1	563.0 / 519.0	N/A	N/A	N/A	N/A	true
PFUnA_2	563.0 / 269.0	N/A	N/A	N/A	N/A	true
PFDoA_1	613.0 / 569.0	4.08	5036.33	< 0	63.5	false
PFDoA_2	613.0 / 319.0	4.07	951.74	< 0	26.1	false
PFTrDA_1	663.0 / 619.0	4.32	4811.21	< 0	133.6	true
PFTrDA_2	663.0 / 169.0	4.33	466.34	< 0	22.0	false
PFTeDA_1	713.0 / 669.0	4.55	5592.95	< 0	180.0	false
PFTeDA_2	713.0 / 169.0	4.55	379.25	< 0	37.4	false
NMeFOSAA_1	570.0 / 419.0	N/A	N/A	N/A	N/A	true
NMeFOSAA_2	570.0 / 512.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_1	584.0 / 419.0	N/A	N/A	N/A	N/A	true
NEtFOSAA_2	584.0 / 483.0	N/A	N/A	N/A	N/A	true

BATTELLE

Summary Quant Report

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Sample Name	CR892PB-FS(3)	**Injection Vial**	27
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:49:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	107551.33	294.901032	673.3	false
d3-MeFOSAA	573.0 / 419.0	3.57	14033.17	274.870168	247.5	false
d5-EtFOSAA	589.0 / 419.0	3.73	18796.84	339.594414	250.0	false
13C5-PFHxA	318.0 / 273.0	1.84	72248.44	280.103061	917.8	false
13C4-PFHpA	367.0 / 322.0	2.25	84027.44	287.449250	832.4	false
13C8-PFOA	421.0 / 376.0	2.66	98697.76	284.434994	1059.6	false
13C9-PFNA	472.0 / 427.0	3.06	97629.10	262.848608	1406.3	false
13C6-PFDA	519.0 / 474.0	3.41	106811.37	293.869246	890.6	false
13C7-PFUnA	570.0 / 525.0	3.73	106476.07	314.393892	539.2	false
13C2-PFTeDA	715.0 / 670.0	4.49	81554.04	269.243602	1794.0	false
13C3-PFBS	302.0 / 99.0	1.52	30388.70	278.442820	461.9	false
13C3-PFHxS	402.0 / 99.0	2.28	26141.77	290.441753	333.8	false
13C8-PFOS	507.0 / 99.0	3.05	29567.92	284.280347	203.2	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:16 PM

Sample Name	CR893LCS-FS(3)	**Injection Vial**	28
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:00:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	115953.31	273.622520	797.9	false
d3-MeFOSAA	573.0 / 419.0	3.57	19069.98	301.501176	152.1	false
d5-EtFOSAA	589.0 / 419.0	3.73	18979.49	276.775239	228.1	false
13C5-PFHxA	318.0 / 273.0	1.84	82582.48	301.027692	778.3	false
13C4-PFHpA	367.0 / 322.0	2.25	88881.70	285.878542	751.3	false
13C8-PFOA	421.0 / 376.0	2.66	103736.46	281.084122	1993.0	false
13C9-PFNA	472.0 / 427.0	3.05	114900.35	290.855267	1198.0	false
13C6-PFDA	519.0 / 474.0	3.41	111487.81	263.980707	1061.7	false
13C7-PFUnA	570.0 / 525.0	3.73	107539.95	273.275105	652.8	false
13C2-PFTeDA	715.0 / 670.0	4.49	101290.56	287.790914	3052.7	false
13C3-PFBS	302.0 / 99.0	1.52	36617.80	270.821422	457.5	false
13C3-PFHxS	402.0 / 99.0	2.27	30370.55	272.360298	306.0	false
13C8-PFOS	507.0 / 99.0	3.05	32171.99	249.672674	226.1	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:19 PM

Sample Name	J8352-FS(3)	**Injection Vial**	29
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:11:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	112051.71	549.855327	1401.6	false
d3-MeFOSAA	573.0 / 419.0	3.57	14015.05	307.786445	175.9	false
d5-EtFOSAA	589.0 / 419.0	3.73	18337.95	371.457923	246.4	true
13C5-PFHxA	318.0 / 273.0	1.84	80139.55	329.234538	756.4	false
13C4-PFHpA	367.0 / 322.0	2.25	88658.51	321.387949	665.4	false
13C8-PFOA	421.0 / 376.0	2.66	88060.89	268.922999	2682.0	false
13C9-PFNA	472.0 / 427.0	3.06	78551.23	224.103438	960.9	false
13C6-PFDA	519.0 / 474.0	3.41	60689.48	298.826772	775.5	false
13C7-PFUnA	570.0 / 525.0	3.73	109156.29	576.819973	602.5	false
13C2-PFTeDA	715.0 / 670.0	4.48	100944.13	596.417540	2085.2	false
13C3-PFBS	302.0 / 99.0	1.52	33623.52	345.422138	394.7	true
13C3-PFHxS	402.0 / 99.0	2.27	27712.80	345.213420	248.6	false
13C8-PFOS	507.0 / 99.0	3.06	24024.40	258.977259	185.7	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:23 PM

Sample Name	J8352-FS-D(5)	**Injection Vial**	30
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:22:03	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	94764.99	267.061372	757.7	false
d3-MeFOSAA	573.0 / 419.0	3.57	16363.25	278.339665	255.7	false
d5-EtFOSAA	589.0 / 419.0	3.73	17909.85	280.996790	208.3	false
13C5-PFHxA	318.0 / 273.0	1.84	69178.83	212.447925	750.2	false
13C4-PFHpA	367.0 / 322.0	2.25	78625.06	213.054633	674.9	false
13C8-PFOA	421.0 / 376.0	2.66	91784.50	209.524610	182.4	false
13C9-PFNA	472.0 / 427.0	3.05	91802.57	195.781303	1185.7	false
13C6-PFDA	519.0 / 474.0	3.41	84096.98	237.804272	757.1	false
13C7-PFUnA	570.0 / 525.0	3.73	100118.20	303.834979	730.8	false
13C2-PFTeDA	715.0 / 670.0	4.49	81759.50	277.421917	1362.6	false
13C3-PFBS	302.0 / 99.0	1.52	29644.40	235.885025	488.1	false
13C3-PFHxS	402.0 / 99.0	2.27	24313.21	234.584981	267.5	false
13C8-PFOS	507.0 / 99.0	3.05	27324.33	228.144154	271.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:27 PM

Sample Name	J8353-FS(3)	**Injection Vial**	31
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:32:55	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	123182.67	316.224290	822.7	false
d3-MeFOSAA	573.0 / 419.0	3.57	18030.16	336.314210	191.6	false
d5-EtFOSAA	589.0 / 419.0	3.73	21200.35	364.747850	284.9	true
13C5-PFHxA	318.0 / 273.0	1.84	83163.46	272.565086	698.8	false
13C4-PFHpA	367.0 / 322.0	2.25	95364.78	275.788653	615.6	false
13C8-PFOA	421.0 / 376.0	2.66	103096.71	251.170631	1054.7	false
13C9-PFNA	472.0 / 427.0	3.05	99887.30	227.344782	898.2	false
13C6-PFDA	519.0 / 474.0	3.41	120063.45	309.266273	746.9	false
13C7-PFUnA	570.0 / 525.0	3.73	132059.58	365.070821	980.2	false
13C2-PFTeDA	715.0 / 670.0	4.48	101209.52	312.828566	2149.5	false
13C3-PFBS	302.0 / 99.0	1.52	34899.27	304.518895	479.5	false
13C3-PFHxS	402.0 / 99.0	2.27	32416.13	342.972459	432.4	false
13C8-PFOS	507.0 / 99.0	3.05	29462.85	269.758312	229.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:31 PM

Sample Name	J8353-FS-D(5)	**Injection Vial**	32
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:43:46	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	104516.03	227.876839	768.8	false
d3-MeFOSAA	573.0 / 419.0	3.57	18075.03	283.803154	257.8	false
d5-EtFOSAA	589.0 / 419.0	3.73	18628.27	269.783079	254.2	false
13C5-PFHxA	318.0 / 273.0	1.84	69568.00	216.981739	631.7	false
13C4-PFHpA	367.0 / 322.0	2.25	78468.48	215.953179	572.6	false
13C8-PFOA	421.0 / 376.0	2.66	95380.97	221.137202	3377.2	false
13C9-PFNA	472.0 / 427.0	3.05	93872.18	203.323529	924.8	false
13C6-PFDA	519.0 / 474.0	3.41	104742.55	229.148257	627.8	false
13C7-PFUnA	570.0 / 525.0	3.73	101690.77	238.759374	916.1	false
13C2-PFTeDA	715.0 / 670.0	4.49	78713.66	206.636400	1371.9	false
13C3-PFBS	302.0 / 99.0	1.52	29226.88	214.670707	439.6	false
13C3-PFHxS	402.0 / 99.0	2.27	27795.11	247.547719	340.3	false
13C8-PFOS	507.0 / 99.0	3.05	26987.87	207.998940	223.1	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:35 PM

Sample Name	J8354-FS(3)	**Injection Vial**	33
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:54:37	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	111948.93	472.063699	564.8	false
d3-MeFOSAA	573.0 / 419.0	3.57	15595.71	329.678537	54.5	true
d5-EtFOSAA	589.0 / 419.0	3.73	17840.56	347.854808	132.9	true
13C5-PFHxA	318.0 / 273.0	1.84	81753.23	300.049702	712.6	false
13C4-PFHpA	367.0 / 322.0	2.25	92084.76	298.213132	659.2	false
13C8-PFOA	421.0 / 376.0	2.66	94421.79	257.600637	1047.9	false
13C9-PFNA	472.0 / 427.0	3.06	78613.60	200.365548	695.6	false
13C6-PFDA	519.0 / 474.0	3.41	63720.06	269.608096	459.6	false
13C7-PFUnA	570.0 / 525.0	3.72	107153.74	486.574748	732.9	false
13C2-PFTeDA	715.0 / 670.0	4.48	94763.49	481.128520	1501.6	false
13C3-PFBS	302.0 / 99.0	1.52	33942.01	335.641150	502.8	true
13C3-PFHxS	402.0 / 99.0	2.27	29097.25	348.891178	369.4	false
13C8-PFOS	507.0 / 99.0	3.05	23528.99	244.142373	227.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:39 PM

Sample Name	J8354-FS-D(5)	**Injection Vial**	34
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:05:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	91689.10	259.449682	1144.3	false
d3-MeFOSAA	573.0 / 419.0	3.57	13758.20	231.929462	88.5	false
d5-EtFOSAA	589.0 / 419.0	3.73	19180.28	298.231153	207.9	false
13C5-PFHxA	318.0 / 273.0	1.84	69186.51	217.310779	632.2	false
13C4-PFHpA	367.0 / 322.0	2.25	72637.47	201.312714	438.2	false
13C8-PFOA	421.0 / 376.0	2.66	97058.70	226.610848	917.1	false
13C9-PFNA	472.0 / 427.0	3.06	85825.10	187.202298	772.8	false
13C6-PFDA	519.0 / 474.0	3.41	85945.71	244.025827	761.0	false
13C7-PFUnA	570.0 / 525.0	3.73	93097.43	283.683935	804.4	false
13C2-PFTeDA	715.0 / 670.0	4.48	77204.30	263.036727	1747.5	false
13C3-PFBS	302.0 / 99.0	1.52	29358.63	231.516545	480.7	false
13C3-PFHxS	402.0 / 99.0	2.27	25198.84	240.950140	348.4	false
13C8-PFOS	507.0 / 99.0	3.05	29242.65	241.972057	245.3	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:43 PM

Sample Name	J8355-FS(3)	**Injection Vial**	35
Sample ID	VC-PM323-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:16:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	110915.59	248.259085	859.2	false
d3-MeFOSAA	573.0 / 419.0	3.57	11462.82	188.811007	177.0	false
d5-EtFOSAA	589.0 / 419.0	3.73	16639.50	252.801909	252.7	false
13C5-PFHxA	318.0 / 273.0	1.84	75623.11	262.928826	595.7	false
13C4-PFHpA	367.0 / 322.0	2.25	85149.67	261.226547	569.7	false
13C8-PFOA	421.0 / 376.0	2.66	110913.47	286.651566	3293.0	false
13C9-PFNA	472.0 / 427.0	3.05	100312.03	242.199758	996.8	false
13C6-PFDA	519.0 / 474.0	3.41	118921.83	267.085481	1098.2	false
13C7-PFUnA	570.0 / 525.0	3.73	112727.04	271.707885	528.4	false
13C2-PFTeDA	715.0 / 670.0	4.48	88474.38	238.434734	2511.8	false
13C3-PFBS	302.0 / 99.0	1.52	35729.76	275.307630	496.7	false
13C3-PFHxS	402.0 / 99.0	2.27	29223.37	273.035258	340.5	false
13C8-PFOS	507.0 / 99.0	3.05	33939.72	274.409125	259.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:49 PM

Sample Name	J8356-FS(3)	**Injection Vial**	36
Sample ID	VC-PM323-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:27:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	117290.88	244.393472	768.2	false
d3-MeFOSAA	573.0 / 419.0	3.57	15712.05	278.972491	192.4	false
d5-EtFOSAA	589.0 / 419.0	3.73	18458.27	302.289904	258.0	false
13C5-PFHxA	318.0 / 273.0	1.84	84167.78	263.490842	776.8	false
13C4-PFHpA	367.0 / 322.0	2.25	94452.02	260.904536	865.0	false
13C8-PFOA	421.0 / 376.0	2.66	111775.18	260.106647	3725.8	false
13C9-PFNA	472.0 / 427.0	3.05	117685.71	255.847071	1096.5	false
13C6-PFDA	519.0 / 474.0	3.40	126448.30	264.371401	1043.0	false
13C7-PFUnA	570.0 / 525.0	3.72	126932.40	284.812755	932.0	false
13C2-PFTeDA	715.0 / 670.0	4.48	98671.51	247.546366	2705.8	false
13C3-PFBS	302.0 / 99.0	1.52	33893.92	281.515650	411.1	false
13C3-PFHxS	402.0 / 99.0	2.27	28655.93	288.599506	294.0	false
13C8-PFOS	507.0 / 99.0	3.05	34571.84	301.304402	290.4	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:05:56 PM

Sample Name	J8357-FS(3)	**Injection Vial**	39
Sample ID	VC-PM323-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:59:44	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	115399.64	279.671814	1064.5	false
d3-MeFOSAA	573.0 / 419.0	3.57	16204.42	261.790047	206.3	false
d5-EtFOSAA	589.0 / 419.0	3.73	19266.24	287.091674	202.3	false
13C5-PFHxA	318.0 / 273.0	1.84	76993.24	282.921082	798.8	false
13C4-PFHpA	367.0 / 322.0	2.25	84706.85	274.651455	533.0	false
13C8-PFOA	421.0 / 376.0	2.66	105141.14	287.191617	1639.8	false
13C9-PFNA	472.0 / 427.0	3.05	106813.56	272.568792	1185.6	false
13C6-PFDA	519.0 / 474.0	3.41	118551.62	288.288869	597.3	false
13C7-PFUnA	570.0 / 525.0	3.73	116810.76	304.851748	834.0	false
13C2-PFTeDA	715.0 / 670.0	4.48	95778.45	279.480464	1298.8	false
13C3-PFBS	302.0 / 99.0	1.52	32952.21	249.032685	591.2	false
13C3-PFHxS	402.0 / 99.0	2.27	31103.40	285.022947	389.8	false
13C8-PFOS	507.0 / 99.0	3.05	30592.92	242.602279	253.9	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:06:01 PM

Sample Name	J8360-FS(3)	**Injection Vial**	40
Sample ID	VC-PM324-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:10:35	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	121744.03	292.030556	731.0	false
d3-MeFOSAA	573.0 / 419.0	3.56	17203.11	255.979232	212.1	false
d5-EtFOSAA	589.0 / 419.0	3.72	18584.13	255.060889	262.6	false
13C5-PFHxA	318.0 / 273.0	1.84	80782.29	274.999600	709.6	false
13C4-PFHpA	367.0 / 322.0	2.25	87707.93	263.454399	644.9	false
13C8-PFOA	421.0 / 376.0	2.66	112721.16	285.238251	3674.4	false
13C9-PFNA	472.0 / 427.0	3.05	113526.56	268.380197	1021.5	false
13C6-PFDA	519.0 / 474.0	3.40	121211.66	291.743454	18583.4	false
13C7-PFUnA	570.0 / 525.0	3.72	124185.70	320.784803	750.8	false
13C2-PFTeDA	715.0 / 670.0	4.47	101299.46	292.568223	1900.7	false
13C3-PFBS	302.0 / 99.0	1.52	32490.11	226.152364	410.5	false
13C3-PFHxS	402.0 / 99.0	2.27	30468.03	257.154780	344.2	false
13C8-PFOS	507.0 / 99.0	3.05	36112.39	263.759672	292.2	false

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Summary Quant Report

Sample Name	J8361-FS(3)	**Injection Vial**	41
Sample ID	VC-PM324-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:21:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	119569.94	254.601407	953.9	false
d3-MeFOSAA	573.0 / 419.0	3.56	19199.45	309.314650	232.2	false
d5-EtFOSAA	589.0 / 419.0	3.72	22121.13	328.717727	257.2	false
13C5-PFHxA	318.0 / 273.0	1.84	87748.62	260.145715	645.5	false
13C4-PFHpA	367.0 / 322.0	2.25	100319.22	262.428623	883.7	false
13C8-PFOA	421.0 / 376.0	2.66	117490.09	258.919039	234.4	false
13C9-PFNA	472.0 / 427.0	3.05	119622.73	246.278854	8730.9	false
13C6-PFDA	519.0 / 474.0	3.40	131047.04	279.989735	995.2	false
13C7-PFUnA	570.0 / 525.0	3.72	132209.80	303.154500	943.0	false
13C2-PFTeDA	715.0 / 670.0	4.48	104765.14	268.593173	1541.6	false
13C3-PFBS	302.0 / 99.0	1.51	37140.98	279.909293	443.7	false
13C3-PFHxS	402.0 / 99.0	2.27	31526.11	288.094255	352.6	false
13C8-PFOS	507.0 / 99.0	3.05	34716.40	274.536953	230.2	false

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Summary Quant Report

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Sample Name	J8362-FS(3)	**Injection Vial**	42
Sample ID	VC-PM324-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:32:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	117432.43	280.592212	776.3	false
d3-MeFOSAA	573.0 / 419.0	3.57	18831.79	316.038537	205.1	false
d5-EtFOSAA	589.0 / 419.0	3.73	21352.89	330.528552	240.5	false
13C5-PFHxA	318.0 / 273.0	1.84	77928.64	259.417231	520.2	false
13C4-PFHpA	367.0 / 322.0	2.25	82851.69	243.362554	735.7	false
13C8-PFOA	421.0 / 376.0	2.66	111803.14	276.657275	1958.2	false
13C9-PFNA	472.0 / 427.0	3.05	115319.58	266.588756	1143.8	false
13C6-PFDA	519.0 / 474.0	3.40	123848.62	296.930544	1000.3	false
13C7-PFUnA	570.0 / 525.0	3.72	126594.41	325.734464	778.7	false
13C2-PFTeDA	715.0 / 670.0	4.48	90614.60	260.690483	1719.6	false
13C3-PFBS	302.0 / 99.0	1.51	34073.54	267.496341	444.7	false
13C3-PFHxS	402.0 / 99.0	2.27	26342.42	250.758977	288.3	false
13C8-PFOS	507.0 / 99.0	3.04	31016.03	255.498850	220.8	false

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Summary Quant Report

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Sample Name	J8363-FS(3)	**Injection Vial**	43
Sample ID	VC-PM324-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:43:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	119933.96	271.366946	794.0	false
d3-MeFOSAA	573.0 / 419.0	3.57	15186.41	246.429847	256.8	false
d5-EtFOSAA	589.0 / 419.0	3.73	19219.74	287.666799	246.6	false
13C5-PFHxA	318.0 / 273.0	1.84	74857.18	230.955890	763.4	false
13C4-PFHpA	367.0 / 322.0	2.24	85656.00	233.186850	917.9	false
13C8-PFOA	421.0 / 376.0	2.65	113861.37	261.130954	1385.2	false
13C9-PFNA	472.0 / 427.0	3.05	107272.44	229.837433	940.1	false
13C6-PFDA	519.0 / 474.0	3.41	122771.58	278.733232	735.1	false
13C7-PFUnA	570.0 / 525.0	3.72	129514.50	315.569328	862.9	false
13C2-PFTeDA	715.0 / 670.0	4.48	99751.19	271.751707	1525.0	false
13C3-PFBS	302.0 / 99.0	1.52	36020.37	273.425221	504.0	false
13C3-PFHxS	402.0 / 99.0	2.27	31813.06	292.816898	436.2	false
13C8-PFOS	507.0 / 99.0	3.04	34243.12	272.750706	220.2	false

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Summary Quant Report

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Sample Name	J8364-FS(3)	**Injection Vial**	44
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:54:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	123593.93	258.942040	803.5	false
d3-MeFOSAA	573.0 / 419.0	3.56	16170.00	266.805095	201.3	false
d5-EtFOSAA	589.0 / 419.0	3.72	21060.93	320.527675	257.4	false
13C5-PFHxA	318.0 / 273.0	1.84	87592.95	282.261274	716.5	false
13C4-PFHpA	367.0 / 322.0	2.25	92434.77	262.825924	732.5	false
13C8-PFOA	421.0 / 376.0	2.66	123001.39	294.631069	1923.0	false
13C9-PFNA	472.0 / 427.0	3.05	110945.45	248.272530	834.9	false
13C6-PFDA	519.0 / 474.0	3.40	136078.01	286.068152	1053.0	false
13C7-PFUnA	570.0 / 525.0	3.72	129237.73	291.579077	1017.5	false
13C2-PFTeDA	715.0 / 670.0	4.48	104881.28	264.571363	1554.1	false
13C3-PFBS	302.0 / 99.0	1.52	35096.81	270.896719	499.2	false
13C3-PFHxS	402.0 / 99.0	2.27	31688.96	296.581654	431.3	false
13C8-PFOS	507.0 / 99.0	3.04	34441.32	278.944723	269.5	false

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Summary Quant Report

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Sample Name	J8364-FS-D(5)	**Injection Vial**	45
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:04:56	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	103192.56	213.601115	938.5	false
d3-MeFOSAA	573.0 / 419.0	3.56	15886.50	220.735957	200.6	false
d5-EtFOSAA	589.0 / 419.0	3.72	17278.32	221.437066	239.9	false
13C5-PFHxA	318.0 / 273.0	1.84	70100.80	231.668316	732.1	false
13C4-PFHpA	367.0 / 322.0	2.25	75871.28	221.244135	791.4	false
13C8-PFOA	421.0 / 376.0	2.66	101465.60	249.257873	1475.7	false
13C9-PFNA	472.0 / 427.0	3.05	105974.25	243.209808	932.7	false
13C6-PFDA	519.0 / 474.0	3.40	105460.24	219.038272	727.4	false
13C7-PFUnA	570.0 / 525.0	3.72	105102.99	234.278159	663.8	false
13C2-PFTeDA	715.0 / 670.0	4.48	85300.75	212.592234	1617.8	false
13C3-PFBS	302.0 / 99.0	1.52	29891.98	194.290613	644.4	false
13C3-PFHxS	402.0 / 99.0	2.27	26890.31	211.930331	368.3	false
13C8-PFOS	507.0 / 99.0	3.04	30836.32	210.310944	206.8	false

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Summary Quant Report

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Sample Name	J8365-FS(3)	**Injection Vial**	46
Sample ID	VC-PM324-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:15:48	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	133870.07	264.304590	903.2	false
d3-MeFOSAA	573.0 / 419.0	3.56	18156.89	275.472258	204.6	false
d5-EtFOSAA	589.0 / 419.0	3.73	24430.01	341.872336	255.8	false
13C5-PFHxA	318.0 / 273.0	1.83	83369.49	245.772292	597.5	false
13C4-PFHpA	367.0 / 322.0	2.24	99158.51	257.932725	786.8	false
13C8-PFOA	421.0 / 376.0	2.65	130945.52	286.947722	1506.7	false
13C9-PFNA	472.0 / 427.0	3.04	127448.34	260.913773	128338.4	false
13C6-PFDA	519.0 / 474.0	3.40	135805.44	269.038545	7065.7	false
13C7-PFUnA	570.0 / 525.0	3.72	133129.81	283.046704	846.7	false
13C2-PFTeDA	715.0 / 670.0	4.48	108043.75	256.838592	1882.1	false
13C3-PFBS	302.0 / 99.0	1.51	36446.96	258.672264	476.2	false
13C3-PFHxS	402.0 / 99.0	2.27	34267.24	294.895351	360.6	false
13C8-PFOS	507.0 / 99.0	3.04	38013.08	283.089544	268.7	false

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	J8366MS-FS(3)	**Injection Vial**	47
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:26:41	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	135505.96	332.098277	1088.4	false
d3-MeFOSAA	573.0 / 419.0	3.57	20623.57	365.815955	180.0	true
d5-EtFOSAA	589.0 / 419.0	3.72	20104.87	328.930339	188.5	false
13C5-PFHxA	318.0 / 273.0	1.84	83143.91	286.307856	628.0	false
13C4-PFHpA	367.0 / 322.0	2.25	90231.55	274.164942	1013.0	false
13C8-PFOA	421.0 / 376.0	2.65	104571.52	267.671814	1333.2	false
13C9-PFNA	472.0 / 427.0	3.05	109727.05	262.393809	742.4	false
13C6-PFDA	519.0 / 474.0	3.40	115267.86	283.460507	1049.4	false
13C7-PFUnA	570.0 / 525.0	3.72	118482.59	312.697449	651.6	false
13C2-PFTeDA	715.0 / 670.0	4.47	110610.55	326.395503	2412.7	false
13C3-PFBS	302.0 / 99.0	1.52	39742.98	329.770163	630.7	false
13C3-PFHxS	402.0 / 99.0	2.27	31019.07	312.090104	401.4	false
13C8-PFOS	507.0 / 99.0	3.05	29775.65	259.247390	207.6	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:06:39 PM

Sample Name	J8366MS-FS-D(5)	**Injection Vial**	48
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:37:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.00	102014.82	238.981514	1017.2	false
d3-MeFOSAA	573.0 / 419.0	3.56	16269.94	292.108634	155.0	false
d5-EtFOSAA	589.0 / 419.0	3.72	18410.61	304.881040	206.9	false
13C5-PFHxA	318.0 / 273.0	1.84	67813.42	240.592116	652.5	false
13C4-PFHpA	367.0 / 322.0	2.25	75181.63	235.357573	578.3	false
13C8-PFOA	421.0 / 376.0	2.65	94684.74	249.707815	1059.3	false
13C9-PFNA	472.0 / 427.0	3.04	95887.18	236.245413	1139.5	false
13C6-PFDA	519.0 / 474.0	3.40	98701.11	232.005975	1463.6	false
13C7-PFUnA	570.0 / 525.0	3.72	95579.55	241.116874	621.9	false
13C2-PFTeDA	715.0 / 670.0	4.47	76489.22	215.744969	1390.4	false
13C3-PFBS	302.0 / 99.0	1.52	28929.11	242.966057	389.0	false
13C3-PFHxS	402.0 / 99.0	2.27	24326.55	247.737258	348.8	false
13C8-PFOS	507.0 / 99.0	3.04	26043.27	229.513483	209.0	false

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Summary Quant Report

Created with Analyst Reporter
Printed: 09/10/2018 2:06:43 PM

Sample Name	J8367MSD-FS(3)	**Injection Vial**	51
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:10:07	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	121909.45	301.840424	949.4	false
d3-MeFOSAA	573.0 / 419.0	3.56	19301.22	373.822385	163.2	true
d5-EtFOSAA	589.0 / 419.0	3.72	17075.79	305.045879	195.3	false
13C5-PFHxA	318.0 / 273.0	1.83	81318.64	291.516220	659.0	false
13C4-PFHpA	367.0 / 322.0	2.24	91745.80	290.208083	819.5	false
13C8-PFOA	421.0 / 376.0	2.65	96668.59	257.599119	972.0	false
13C9-PFNA	472.0 / 427.0	3.04	103389.82	257.387500	1158.4	false
13C6-PFDA	519.0 / 474.0	3.40	108304.38	269.068067	979.4	false
13C7-PFUnA	570.0 / 525.0	3.72	116787.69	311.385729	904.2	false
13C2-PFTeDA	715.0 / 670.0	4.47	103984.78	309.991106	2156.6	false
13C3-PFBS	302.0 / 99.0	1.51	37255.78	337.540815	605.5	true
13C3-PFHxS	402.0 / 99.0	2.26	31073.76	341.371082	353.8	false
13C8-PFOS	507.0 / 99.0	3.03	30463.32	289.608944	232.6	false

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Summary Quant Report

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Sample Name	J8367MSD-FS-D(5)	**Injection Vial**	52
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:20:59	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.00	92862.72	214.992828	985.7	false
d3-MeFOSAA	573.0 / 419.0	3.56	15690.52	280.611114	184.3	false
d5-EtFOSAA	589.0 / 419.0	3.71	16439.41	271.180059	181.4	false
13C5-PFHxA	318.0 / 273.0	1.83	64801.01	208.551249	843.3	false
13C4-PFHpA	367.0 / 322.0	2.24	68763.89	195.272980	879.1	false
13C8-PFOA	421.0 / 376.0	2.65	89890.04	215.044800	1042.9	false
13C9-PFNA	472.0 / 427.0	3.04	91294.01	204.037662	867.7	false
13C6-PFDA	519.0 / 474.0	3.39	94820.71	220.273337	912.2	false
13C7-PFUnA	570.0 / 525.0	3.71	96618.84	240.882905	648.9	false
13C2-PFTeDA	715.0 / 670.0	4.47	78705.69	219.395709	1409.4	false
13C3-PFBS	302.0 / 99.0	1.51	27618.81	231.059978	494.0	false
13C3-PFHxS	402.0 / 99.0	2.26	23609.97	239.505476	338.9	false
13C8-PFOS	507.0 / 99.0	3.04	30646.48	269.031100	301.6	false

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Summary Quant Report

Created with Analyst Reporter
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Sample Name	J8373-FS(3)	**Injection Vial**	53
Sample ID	VC-PM64B-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:31:50	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	125720.23	285.160213	1021.7	false
d3-MeFOSAA	573.0 / 419.0	3.56	18535.36	310.140713	187.9	false
d5-EtFOSAA	589.0 / 419.0	3.72	22268.46	343.678109	276.2	false
13C5-PFHxA	318.0 / 273.0	1.84	79952.82	252.650941	521.8	false
13C4-PFHpA	367.0 / 322.0	2.24	91401.41	254.853560	767.3	false
13C8-PFOA	421.0 / 376.0	2.65	117495.66	275.991266	3031.3	false
13C9-PFNA	472.0 / 427.0	3.05	113593.41	249.274204	953.0	false
13C6-PFDA	519.0 / 474.0	3.40	120915.62	275.196123	2097.2	false
13C7-PFUnA	570.0 / 525.0	3.72	126568.71	309.151759	832.7	false
13C2-PFTeDA	715.0 / 670.0	4.48	98118.84	267.963457	2387.8	false
13C3-PFBS	302.0 / 99.0	1.52	35250.34	275.913576	536.4	false
13C3-PFHxS	402.0 / 99.0	2.27	31832.60	302.121853	333.7	false
13C8-PFOS	507.0 / 99.0	3.04	35317.12	290.066308	266.4	false

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Summary Quant Report

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Sample Name	J8374-FS(3)	**Injection Vial**	54
Sample ID	VC-PM64B-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:42:42	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	102972.63	257.267048	833.1	false
d3-MeFOSAA	573.0 / 419.0	3.56	15010.31	274.264620	195.2	false
d5-EtFOSAA	589.0 / 419.0	3.72	19145.00	322.655756	273.9	false
13C5-PFHxA	318.0 / 273.0	1.83	68711.32	263.831305	593.5	false
13C4-PFHpA	367.0 / 322.0	2.24	83413.73	282.609154	850.8	false
13C8-PFOA	421.0 / 376.0	2.65	102980.51	293.926966	1121.2	false
13C9-PFNA	472.0 / 427.0	3.04	100177.33	267.118835	985.5	false
13C6-PFDA	519.0 / 474.0	3.40	104370.24	261.646646	1111.2	false
13C7-PFUnA	570.0 / 525.0	3.72	106408.39	286.285800	691.9	false
13C2-PFTeDA	715.0 / 670.0	4.48	84798.21	255.087063	2081.9	false
13C3-PFBS	302.0 / 99.0	1.51	30880.65	263.948122	457.8	false
13C3-PFHxS	402.0 / 99.0	2.26	27132.19	281.201244	329.1	false
13C8-PFOS	507.0 / 99.0	3.04	32760.24	293.820070	237.7	false

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Summary Quant Report

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Sample Name	J8375-FS(3)	**Injection Vial**	1
Sample ID	VC-PM64B-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:53:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.00	129017.64	274.595748	1377.4	false
d3-MeFOSAA	573.0 / 419.0	3.56	21330.11	294.399380	368.3	false
d5-EtFOSAA	589.0 / 419.0	3.72	24617.89	313.399598	251.2	false
13C5-PFHxA	318.0 / 273.0	1.83	81364.04	240.674622	765.2	false
13C4-PFHpA	367.0 / 322.0	2.24	93791.53	244.800382	897.1	false
13C8-PFOA	421.0 / 376.0	2.65	118506.83	260.571872	3104.1	false
13C9-PFNA	472.0 / 427.0	3.04	120252.71	247.018627	875.2	false
13C6-PFDA	519.0 / 474.0	3.40	131420.08	280.661317	826.7	false
13C7-PFUnA	570.0 / 525.0	3.72	134174.78	307.522704	1119.0	false
13C2-PFTeDA	715.0 / 670.0	4.47	106294.49	272.392325	2725.1	false
13C3-PFBS	302.0 / 99.0	1.51	41220.42	266.138839	440.7	false
13C3-PFHxS	402.0 / 99.0	2.26	32372.35	253.437194	301.6	false
13C8-PFOS	507.0 / 99.0	3.04	39957.42	270.704552	254.6	false

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Summary Quant Report

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Printed: 09/10/2018 2:07:04 PM

Sample Name	J8376-FS(3)	**Injection Vial**	2
Sample ID	VC-PM64B-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:04:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	127293.37	328.642485	1345.6	false
d3-MeFOSAA	573.0 / 419.0	3.56	17645.01	305.478272	197.6	false
d5-EtFOSAA	589.0 / 419.0	3.72	22038.73	351.924068	257.4	true
13C5-PFHxA	318.0 / 273.0	1.83	78463.14	275.366307	618.4	false
13C4-PFHpA	367.0 / 322.0	2.24	89004.80	275.619061	507.1	false
13C8-PFOA	421.0 / 376.0	2.65	113619.15	296.403312	1175.9	false
13C9-PFNA	472.0 / 427.0	3.04	113959.55	277.736458	1246.1	false
13C6-PFDA	519.0 / 474.0	3.40	123240.60	319.262457	1415.2	false
13C7-PFUnA	570.0 / 525.0	3.72	118582.19	329.684826	682.1	false
13C2-PFTeDA	715.0 / 670.0	4.47	101695.45	316.125014	2323.5	false
13C3-PFBS	302.0 / 99.0	1.51	37768.40	305.871631	461.4	false
13C3-PFHxS	402.0 / 99.0	2.26	35202.22	345.685304	338.6	false
13C8-PFOS	507.0 / 99.0	3.04	37220.92	316.300542	256.6	false

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Summary Quant Report

Sample Name	J8377-FS(3)	**Injection Vial**	3
Sample ID	VC-PM64B-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:15:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.00	103595.53	265.508843	860.2	false
d3-MeFOSAA	573.0 / 419.0	3.56	17020.46	334.117300	262.3	false
d5-EtFOSAA	589.0 / 419.0	3.71	12896.39	233.507015	161.7	false
13C5-PFHxA	318.0 / 273.0	1.83	78445.16	288.638007	683.1	false
13C4-PFHpA	367.0 / 322.0	2.24	92174.79	299.261066	830.8	false
13C8-PFOA	421.0 / 376.0	2.65	110689.41	302.746989	1829.3	false
13C9-PFNA	472.0 / 427.0	3.04	99639.54	254.598672	964.8	false
13C6-PFDA	519.0 / 474.0	3.40	116536.37	299.692288	819.7	false
13C7-PFUnA	570.0 / 525.0	3.71	81288.67	224.351795	781.6	false
13C2-PFTeDA	715.0 / 670.0	4.47	103062.93	318.038612	1605.7	false
13C3-PFBS	302.0 / 99.0	1.51	37124.69	340.912301	492.8	true
13C3-PFHxS	402.0 / 99.0	2.26	31081.00	346.078870	381.0	true
13C8-PFOS	507.0 / 99.0	3.04	34793.23	335.256251	219.9	false

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Summary Quant Report

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Sample Name	J8378-FS(3)	**Injection Vial**	4
Sample ID	VC-PM64B-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:26:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	126272.85	279.691061	678.5	false
d3-MeFOSAA	573.0 / 419.0	3.56	18833.61	292.222622	187.2	false
d5-EtFOSAA	589.0 / 419.0	3.72	23232.73	332.494487	290.0	false
13C5-PFHxA	318.0 / 273.0	1.83	65301.16	222.091364	627.6	false
13C4-PFHpA	367.0 / 322.0	2.24	83023.35	249.150476	872.6	false
13C8-PFOA	421.0 / 376.0	2.65	113396.60	286.679858	1558.8	false
13C9-PFNA	472.0 / 427.0	3.04	118833.74	280.664553	1036.6	false
13C6-PFDA	519.0 / 474.0	3.40	131165.39	291.517073	996.7	false
13C7-PFUnA	570.0 / 525.0	3.72	121549.90	289.924409	666.5	false
13C2-PFTeDA	715.0 / 670.0	4.47	103027.27	274.764244	1395.1	false
13C3-PFBS	302.0 / 99.0	1.51	39676.56	287.982705	431.8	false
13C3-PFHxS	402.0 / 99.0	2.27	31945.09	281.149152	436.6	false
13C8-PFOS	507.0 / 99.0	3.04	36379.61	277.071954	231.0	false

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Summary Quant Report

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Sample Name	J8379-FS(3)	**Injection Vial**	5
Sample ID	VC-PM64B-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:37:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	115178.70	290.990603	944.1	false
d3-MeFOSAA	573.0 / 419.0	3.56	15684.02	285.493141	177.6	false
d5-EtFOSAA	589.0 / 419.0	3.72	18469.21	310.092141	205.0	false
13C5-PFHxA	318.0 / 273.0	1.84	71740.52	270.337387	707.6	false
13C4-PFHpA	367.0 / 322.0	2.24	85113.18	283.001757	512.5	false
13C8-PFOA	421.0 / 376.0	2.65	100722.51	282.133432	1025.9	false
13C9-PFNA	472.0 / 427.0	3.05	105645.40	276.458071	1089.5	false
13C6-PFDA	519.0 / 474.0	3.40	119013.06	301.701536	815.2	false
13C7-PFUnA	570.0 / 525.0	3.72	117369.81	319.319014	831.8	false
13C2-PFTeDA	715.0 / 670.0	4.47	91840.21	279.369560	1322.7	false
13C3-PFBS	302.0 / 99.0	1.51	33566.10	285.819191	480.9	false
13C3-PFHxS	402.0 / 99.0	2.27	29173.89	301.220920	388.5	false
13C8-PFOS	507.0 / 99.0	3.05	31194.53	278.721990	216.4	false

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Summary Quant Report

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Sample Name	J8380-FS(3)	**Injection Vial**	6
Sample ID	VC-PM64B-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:47:58	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.00	116459.91	289.675718	1556.7	false
d3-MeFOSAA	573.0 / 419.0	3.56	14025.85	251.727435	208.6	false
d5-EtFOSAA	589.0 / 419.0	3.72	18557.34	307.199890	290.9	false
13C5-PFHxA	318.0 / 273.0	1.84	78963.76	284.475551	729.6	false
13C4-PFHpA	367.0 / 322.0	2.24	85125.53	270.599899	610.6	false
13C8-PFOA	421.0 / 376.0	2.65	110271.54	295.302369	952.5	false
13C9-PFNA	472.0 / 427.0	3.04	115463.81	288.868406	1247.6	false
13C6-PFDA	519.0 / 474.0	3.40	125499.70	313.223568	1213.1	false
13C7-PFUnA	570.0 / 525.0	3.72	122394.64	327.838239	674.2	false
13C2-PFTeDA	715.0 / 670.0	4.47	94901.54	284.215855	1354.3	false
13C3-PFBS	302.0 / 99.0	1.51	35319.57	296.530197	403.3	false
13C3-PFHxS	402.0 / 99.0	2.27	29017.33	295.400485	322.9	false
13C8-PFOS	507.0 / 99.0	3.04	37305.83	328.649082	211.6	false

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Summary Quant Report

Created with Analyst Reporter
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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	2018-10-08T16:56:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Area	Conc. (ng/L)	Signal/Noise Ratio	Modified
13C2-PFDoA	615.0 / 570.0	4.07	83079.49	244.062183	872.8	false
d3-MeFOSAA	573.0 / 419.0	3.61	11529.03	200.727365	199.5	false
d5-EtFOSAA	589.0 / 419.0	3.77	13317.62	213.867257	165.8	false
13C5-PFHxA	318.0 / 273.0	1.86	59314.56	231.163190	562.4	false
13C4-PFHpA	367.0 / 322.0	2.27	67798.15	233.144880	500.9	false
13C8-PFOA	421.0 / 376.0	2.69	79306.14	229.747357	1614.2	false
13C9-PFNA	472.0 / 427.0	3.09	85625.55	231.738269	7545.8	false
13C6-PFDA	519.0 / 474.0	3.45	90551.24	266.917566	857.8	false
13C7-PFUnA	570.0 / 525.0	3.77	79330.22	250.961396	627.3	false
13C2-PFTeDA	715.0 / 670.0	4.54	67708.22	239.490036	1647.5	false
13C3-PFBS	302.0 / 99.0	1.54	25685.07	209.192727	431.4	false
13C3-PFHxS	402.0 / 99.0	2.30	22191.74	219.158063	311.5	false
13C8-PFOS	507.0 / 99.0	3.08	27485.78	234.896323	217.0	false

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Summary Ion Ratio Report

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Sample Name	CR892PB-FS(3)	**Injection Vial**	27
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:49:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.29	PFHxS	0.400	0.285	ü
PFOA_1	413.0 / 369.0	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	CR893LCS-FS(3)	**Injection Vial**	28
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:00:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.320	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.75	PFUnA			
PFUnA_2	563.0 / 269.0	3.75	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.27	PFTrDA	0.070	0.067	ü
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.510	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.74	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.74	NEtFOSAA	0.070	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8352-FS(3)	**Injection Vial**	29
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:11:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.310	0.302	ü
PFHxA_1	313.0 / 269.0	1.86	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.320	0.301	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.200	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.050	0.044	ü
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	3.74	PFUnA	0.060	0.055	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.150	0.159	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.22	PFTrDA	0.130	0.067	
PFTeDA_1	713.0 / 669.0	4.49	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.49	PFTeDA	0.040	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.58	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.58	NMeFOSAA	0.640	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8352-FS-D(5)	**Injection Vial**	30
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:22:03	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8353-FS(3)	**Injection Vial**	31
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:32:55	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.27	PFHpA	0.020	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.310	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.050	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.130	0.159	ü
PFTrDA_1	663.0 / 619.0	4.22	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.20	PFTrDA	0.270	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8353-FS-D(5)	**Injection Vial**	32
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:43:46	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8354-FS(3)	**Injection Vial**	33
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:54:37	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	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	2.67	PFOA	0.070	0.067	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.370	0.301	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.220	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.050	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	3.58	PFDoA	0.170	0.159	ü
PFTrDA_1	663.0 / 619.0	4.20	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.20	PFTrDA	0.390	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8354-FS-D(5)	**Injection Vial**	34
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:05:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.200	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8355-FS(3)	**Injection Vial**	35
Sample ID	VC-PM323-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:16:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.410	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.060	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.24	PFHpA	0.010	0.021	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	0.100	0.067	ü
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.05	PFNA	0.230	0.301	ü
PFOS_1	499.0 / 80.0	3.07	PFOS			
PFOS_2	499.0 / 99.0	3.07	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.43	PFDA			
PFDA_2	513.0 / 219.0	3.36	PFDA	0.060	0.044	ü
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	3.74	PFUnA	0.080	0.055	ü
PFDoA_1	613.0 / 569.0	4.03	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.180	0.159	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.19	PFTrDA	0.080	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8356-FS(3)	**Injection Vial**	36
Sample ID	VC-PM323-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:27:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.330	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.050	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.040	0.021	
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	2.67	PFOA	0.080	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.270	0.301	ü
PFOS_1	499.0 / 80.0	3.01	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.140	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.04	PFDoA	0.240	0.159	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8357-FS(3)	**Injection Vial**	39
Sample ID	VC-PM323-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:59:44	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.390	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.040	0.021	
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	2.63	PFOA	0.090	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.160	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8360-FS(3)	**Injection Vial**	40
Sample ID	VC-PM324-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:10:35	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.310	0.302	ü
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8361-FS(3)	**Injection Vial**	41
Sample ID	VC-PM324-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:21:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.51	PFBS	0.450	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.080	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	N/A	PFOA			
PFOA_2	413.0 / 169.0	N/A	PFOA	N/A	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.210	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8362-FS(3)	**Injection Vial**	42
Sample ID	VC-PM324-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:32:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.51	PFBS	0.670	0.302	
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.83	PFHxA	0.040	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.28	PFHxS	0.330	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.090	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8363-FS(3)	**Injection Vial**	43
Sample ID	VC-PM324-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:43:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.24	PFHpA	0.020	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.320	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.200	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.46	PFDA	0.030	0.044	ü
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8364-FS(3)	**Injection Vial**	44
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:54:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.500	0.302	
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.030	0.021	
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	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.340	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.050	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.130	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.19	PFTrDA	0.170	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8364-FS-D(5)	**Injection Vial**	45
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:04:56	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8365-FS(3)	**Injection Vial**	46
Sample ID	VC-PM324-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:15:48	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.400	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.86	PFHxA	0.080	0.071	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.29	PFHpA	0.020	0.021	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	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.65	PFOA	0.050	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.08	PFNA	0.330	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.170	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8366MS-FS(3)	**Injection Vial**	47
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:26:41	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.26	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	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	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.320	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	3.74	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.26	PFTrDA	0.060	0.067	ü
PFTeDA_1	713.0 / 669.0	4.48	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.57	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.57	NMeFOSAA	0.530	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.060	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8366MS-FS-D(5)	**Injection Vial**	48
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:37:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.05	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8367MSD-FS(3)	**Injection Vial**	51
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:10:07	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.021	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	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.05	PFNA			
PFNA_2	463.0 / 219.0	3.05	PFNA	0.310	0.301	ü
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.05	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	3.73	PFUnA	0.050	0.055	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.26	PFTrDA	0.070	0.067	ü
PFTeDA_1	713.0 / 669.0	4.48	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.48	PFTeDA	0.050	0.049	ü
NMeFOSAA_1	570.0 / 419.0	3.56	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	3.56	NMeFOSAA	0.530	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.060	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8367MSD-FS-D(5)	**Injection Vial**	52
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:20:59	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.05	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8373-FS(3)	**Injection Vial**	53
Sample ID	VC-PM64B-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:31:50	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.540	0.302	
PFHxA_1	313.0 / 269.0	1.85	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.050	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.300	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.68	PFOA	0.040	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.07	PFNA	0.310	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.42	PFDA			
PFDA_2	513.0 / 219.0	3.40	PFDA	0.060	0.044	ü
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.27	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.26	PFTrDA	0.070	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8374-FS(3)	**Injection Vial**	54
Sample ID	VC-PM64B-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:42:42	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	1.50	PFBS	0.620	0.302	
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	ü
PFHxS_1	399.0 / 80.0	2.28	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.250	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.64	PFOA	0.030	0.067	
PFNA_1	463.0 / 419.0	3.07	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.430	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.03	PFDoA	0.180	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8375-FS(3)	**Injection Vial**	1
Sample ID	VC-PM64B-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:53:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	ü
PFHxS_1	399.0 / 80.0	2.27	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.310	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.56	PFOA	0.040	0.067	ü
PFNA_1	463.0 / 419.0	N/A	PFNA			
PFNA_2	463.0 / 219.0	N/A	PFNA	N/A	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.05	PFOS	0.150	0.174	ü
PFDA_1	513.0 / 469.0	N/A	PFDA			
PFDA_2	513.0 / 219.0	N/A	PFDA	N/A	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	N/A	PFDoA			
PFDoA_2	613.0 / 319.0	N/A	PFDoA	N/A	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8376-FS(3)	**Injection Vial**	2
Sample ID	VC-PM64B-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:04:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.050	0.071	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.030	0.021	ü
PFHxS_1	399.0 / 80.0	2.27	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.270	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.070	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.300	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.060	0.044	ü
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.060	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8377-FS(3)	**Injection Vial**	3
Sample ID	VC-PM64B-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:15:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.300	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.070	0.071	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.25	PFHpA	0.020	0.021	ü
PFHxS_1	399.0 / 80.0	2.27	PFHxS			
PFHxS_2	399.0 / 99.0	2.27	PFHxS	0.300	0.285	ü
PFOA_1	413.0 / 369.0	2.66	PFOA			
PFOA_2	413.0 / 169.0	2.66	PFOA	0.060	0.067	ü
PFNA_1	463.0 / 419.0	3.05	PFNA			
PFNA_2	463.0 / 219.0	3.05	PFNA	0.260	0.301	ü
PFOS_1	499.0 / 80.0	3.05	PFOS			
PFOS_2	499.0 / 99.0	3.05	PFOS	0.200	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.41	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	3.73	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	
PFDoA_1	613.0 / 569.0	4.01	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	PFDoA	0.160	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.73	NEtFOSAA	0.110	0.065	

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Summary Ion Ratio Report

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Sample Name	J8378-FS(3)	**Injection Vial**	4
Sample ID	VC-PM64B-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:26:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.84	PFHxA	0.060	0.071	ü
PFHpA_1	363.0 / 319.0	2.25	PFHpA			
PFHpA_2	363.0 / 169.0	2.26	PFHpA	0.020	0.021	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	2.62	PFOA	0.070	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.05	PFNA	0.250	0.301	ü
PFOS_1	499.0 / 80.0	3.00	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.150	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.050	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	4.01	PFDoA			
PFDoA_2	613.0 / 319.0	4.01	PFDoA	0.120	0.159	ü
PFTrDA_1	663.0 / 619.0	N/A	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	ü
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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Summary Ion Ratio Report

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Sample Name	J8379-FS(3)	**Injection Vial**	5
Sample ID	VC-PM64B-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:37:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	Ratio Group	Calculated Ion ratio	Expected Ion Ratio	Ratio OK
PFBS_1	298.9 / 80.0	1.53	PFBS			
PFBS_2	298.9 / 99.0	1.52	PFBS	0.280	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	2.67	PFOA	0.090	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.06	PFNA	0.370	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.06	PFOS	0.190	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.120	0.044	
PFUnA_1	563.0 / 519.0	3.74	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.090	0.159	ü
PFTrDA_1	663.0 / 619.0	4.26	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.72	NEtFOSAA	0.290	0.065	

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Summary Ion Ratio Report

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Sample Name	J8380-FS(3)	**Injection Vial**	6
Sample ID	VC-PM64B-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:47:58	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	0.350	0.302	ü
PFHxA_1	313.0 / 269.0	1.84	PFHxA			
PFHxA_2	313.0 / 119.0	1.85	PFHxA	0.050	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	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	0.070	0.067	ü
PFNA_1	463.0 / 419.0	3.06	PFNA			
PFNA_2	463.0 / 219.0	3.05	PFNA	0.250	0.301	ü
PFOS_1	499.0 / 80.0	3.06	PFOS			
PFOS_2	499.0 / 99.0	3.05	PFOS	0.180	0.174	ü
PFDA_1	513.0 / 469.0	3.41	PFDA			
PFDA_2	513.0 / 219.0	3.42	PFDA	0.040	0.044	ü
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	4.02	PFDoA			
PFDoA_2	613.0 / 319.0	4.02	PFDoA	0.130	0.159	ü
PFTrDA_1	663.0 / 619.0	4.25	PFTrDA			
PFTrDA_2	663.0 / 169.0	N/A	PFTrDA	N/A	0.067	
PFTeDA_1	713.0 / 669.0	N/A	PFTeDA			
PFTeDA_2	713.0 / 169.0	N/A	PFTeDA	N/A	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	3.73	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	3.72	NEtFOSAA	0.110	0.065	

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Summary Ion Ratio 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	2018-10-08T16:56:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	1.54	PFBS	0.330	0.302	ü
PFHxA_1	313.0 / 269.0	N/A	PFHxA			
PFHxA_2	313.0 / 119.0	N/A	PFHxA	N/A	0.071	ü
PFHpA_1	363.0 / 319.0	N/A	PFHpA			
PFHpA_2	363.0 / 169.0	N/A	PFHpA	N/A	0.021	ü
PFHxS_1	399.0 / 80.0	2.32	PFHxS			
PFHxS_2	399.0 / 99.0	2.32	PFHxS	0.210	0.285	ü
PFOA_1	413.0 / 369.0	2.70	PFOA			
PFOA_2	413.0 / 169.0	2.70	PFOA	0.090	0.067	ü
PFNA_1	463.0 / 419.0	3.10	PFNA			
PFNA_2	463.0 / 219.0	3.10	PFNA	0.350	0.301	ü
PFOS_1	499.0 / 80.0	N/A	PFOS			
PFOS_2	499.0 / 99.0	N/A	PFOS	N/A	0.174	ü
PFDA_1	513.0 / 469.0	3.46	PFDA			
PFDA_2	513.0 / 219.0	3.48	PFDA	0.110	0.044	
PFUnA_1	563.0 / 519.0	N/A	PFUnA			
PFUnA_2	563.0 / 269.0	N/A	PFUnA	N/A	0.055	ü
PFDoA_1	613.0 / 569.0	4.08	PFDoA			
PFDoA_2	613.0 / 319.0	4.07	PFDoA	0.190	0.159	ü
PFTrDA_1	663.0 / 619.0	4.32	PFTrDA			
PFTrDA_2	663.0 / 169.0	4.33	PFTrDA	0.100	0.067	ü
PFTeDA_1	713.0 / 669.0	4.55	PFTeDA			
PFTeDA_2	713.0 / 169.0	4.55	PFTeDA	0.070	0.049	ü
NMeFOSAA_1	570.0 / 419.0	N/A	NMeFOSAA			
NMeFOSAA_2	570.0 / 512.0	N/A	NMeFOSAA	N/A	0.543	ü
NEtFOSAA_1	584.0 / 419.0	N/A	NEtFOSAA			
NEtFOSAA_2	584.0 / 483.0	N/A	NEtFOSAA	N/A	0.065	ü

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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	2018-10-08T16:56:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	25685.07	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	25685.07	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	59314.56	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	59314.56	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	67798.15	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	67798.15	250.00
PFHxS_1	399.0 / 80.0	2.32	13C3-PFHxS	402.0 / 99.0	22237.52	236.50
PFHxS_2	399.0 / 99.0	2.32	13C3-PFHxS	402.0 / 99.0	22237.52	236.50
PFOA_1	413.0 / 369.0	2.70	13C8-PFOA	421.0 / 376.0	79306.14	250.00
PFOA_2	413.0 / 169.0	2.70	13C8-PFOA	421.0 / 376.0	79306.14	250.00
PFNA_1	463.0 / 419.0	3.10	13C9-PFNA	472.0 / 427.0	85625.55	250.00
PFNA_2	463.0 / 219.0	3.10	13C9-PFNA	472.0 / 427.0	85625.55	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	27988.76	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	27988.76	239.25
PFDA_1	513.0 / 469.0	3.46	13C6-PFDA	519.0 / 474.0	90551.24	250.00
PFDA_2	513.0 / 219.0	3.48	13C6-PFDA	519.0 / 474.0	90551.24	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	79330.22	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	79330.22	250.00
PFDoA_1	613.0 / 569.0	4.08	13C2-PFDoA	615.0 / 570.0	83079.49	250.00
PFDoA_2	613.0 / 319.0	4.07	13C2-PFDoA	615.0 / 570.0	83079.49	250.00
PFTrDA_1	663.0 / 619.0	4.32	13C2-PFTeDA	715.0 / 670.0	67708.22	250.00
PFTrDA_2	663.0 / 169.0	4.33	13C2-PFTeDA	715.0 / 670.0	67708.22	250.00
PFTeDA_1	713.0 / 669.0	4.55	13C2-PFTeDA	715.0 / 670.0	67708.22	250.00
PFTeDA_2	713.0 / 169.0	4.55	13C2-PFTeDA	715.0 / 670.0	67708.22	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	12168.37	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	12168.37	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	13720.39	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	13720.39	250.00

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Summary Internal Standard Report

Sample Name	CR892PB-FS(3)	**Injection Vial**	27
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:49:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	30388.70	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	30388.70	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	72248.44	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	72248.44	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	84027.44	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	84027.44	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	25470.68	236.50
PFHxS_2	399.0 / 99.0	2.29	13C3-PFHxS	402.0 / 99.0	25470.68	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	98697.76	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	98697.76	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	97629.10	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	97629.10	250.00
PFOS_1	499.0 / 80.0	N/A	13C8-PFOS	507.0 / 99.0	30009.83	239.25
PFOS_2	499.0 / 99.0	N/A	13C8-PFOS	507.0 / 99.0	30009.83	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	106811.37	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	106811.37	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	106476.07	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	106476.07	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	107551.33	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	107551.33	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	81554.04	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	81554.04	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	81554.04	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	81554.04	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14234.10	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14234.10	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18863.74	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18863.74	250.00

Sample Name	CR893LCS-FS(3)	**Injection Vial**	28
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:00:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	36617.80	232.25
PFBS_2	298.9 / 99.0	1.54	13C3-PFBS	302.0 / 99.0	36617.80	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	82582.48	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	82582.48	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	88881.70	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	88881.70	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	29034.43	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	29034.43	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	103736.46	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	103736.46	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	114900.35	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	114900.35	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	32186.78	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	32186.78	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	111487.81	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	111487.81	250.00
PFUnA_1	563.0 / 519.0	3.75	13C7-PFUnA	570.0 / 525.0	107539.95	250.00
PFUnA_2	563.0 / 269.0	3.75	13C7-PFUnA	570.0 / 525.0	107539.95	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	115953.31	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	115953.31	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	101290.56	250.00
PFTrDA_2	663.0 / 169.0	4.27	13C2-PFTeDA	715.0 / 670.0	101290.56	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	101290.56	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	101290.56	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	19234.77	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	19234.77	250.00
NEtFOSAA_1	584.0 / 419.0	3.74	d5-EtFOSAA	589.0 / 419.0	19311.08	250.00
NEtFOSAA_2	584.0 / 483.0	3.74	d5-EtFOSAA	589.0 / 419.0	19311.08	250.00

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Summary Internal Standard Report

Sample Name	J8352-FS(3)	**Injection Vial**	29
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:11:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	35304.24	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	35304.24	232.25
PFHxA_1	313.0 / 269.0	1.86	13C5-PFHxA	318.0 / 273.0	80139.55	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	80139.55	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	88658.51	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	88658.51	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	27950.10	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	27950.10	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	88060.89	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	88060.89	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	78551.23	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	78551.23	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	24179.87	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	24179.87	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	60689.48	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	60689.48	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	109156.29	250.00
PFUnA_2	563.0 / 269.0	3.74	13C7-PFUnA	570.0 / 525.0	109156.29	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	112051.71	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	112051.71	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	100944.13	250.00
PFTrDA_2	663.0 / 169.0	4.22	13C2-PFTeDA	715.0 / 670.0	100944.13	250.00
PFTeDA_1	713.0 / 669.0	4.49	13C2-PFTeDA	715.0 / 670.0	100944.13	250.00
PFTeDA_2	713.0 / 169.0	4.49	13C2-PFTeDA	715.0 / 670.0	100944.13	250.00
NMeFOSAA_1	570.0 / 419.0	3.58	d3-MeFOSAA	573.0 / 419.0	14481.72	250.00
NMeFOSAA_2	570.0 / 512.0	3.58	d3-MeFOSAA	573.0 / 419.0	14481.72	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	20006.67	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	20006.67	250.00

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Summary Internal Standard Report

Sample Name	J8352-FS-D(5)	**Injection Vial**	30
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:22:03	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	29644.40	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	29644.40	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	69178.83	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	69178.83	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	78625.06	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	78625.06	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	23936.76	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	23936.76	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	91784.50	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	91784.50	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	91802.57	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	91802.57	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	27744.13	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	27744.13	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	84096.98	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	84096.98	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	100118.20	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	100118.20	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	94764.99	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	94764.99	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	81759.50	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	81759.50	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	81759.50	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	81759.50	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16076.86	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16076.86	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17993.19	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17993.19	250.00

Sample Name	J8353-FS(3)	**Injection Vial**	31
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:32:55	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	34899.27	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	34899.27	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	83163.46	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	83163.46	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	95364.78	250.00
PFHpA_2	363.0 / 169.0	2.27	13C4-PFHpA	367.0 / 322.0	95364.78	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	32123.12	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	32123.12	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	103096.71	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	103096.71	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	99887.30	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	99887.30	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	29856.81	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	29856.81	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	120063.45	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	120063.45	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	132059.58	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	132059.58	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	123182.67	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	123182.67	250.00
PFTrDA_1	663.0 / 619.0	4.22	13C2-PFTeDA	715.0 / 670.0	101209.52	250.00
PFTrDA_2	663.0 / 169.0	4.20	13C2-PFTeDA	715.0 / 670.0	101209.52	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	101209.52	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	101209.52	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	18312.82	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	18312.82	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	22118.69	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	22118.69	250.00

Sample Name	J8353-FS-D(5)	**Injection Vial**	32
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:43:46	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	29226.88	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	29226.88	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	69568.00	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	69568.00	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	78468.48	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	78468.48	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	26670.67	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	26670.67	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	95380.97	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	95380.97	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	93872.18	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	93872.18	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	27759.58	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	27759.58	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	104742.55	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	104742.55	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	101690.77	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	101690.77	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	104516.03	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	104516.03	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	78713.66	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	78713.66	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	78713.66	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	78713.66	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	18806.85	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	18806.85	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17792.38	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17792.38	250.00

Sample Name	J8354-FS(3)	**Injection Vial**	33
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:54:37	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	35673.59	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	35673.59	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	81753.23	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	81753.23	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	92084.76	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	92084.76	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	28559.32	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	28559.32	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	94421.79	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	94421.79	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	78613.60	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	78613.60	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	24089.32	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	24089.32	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	63720.06	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	63720.06	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	107153.74	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	107153.74	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	111948.93	250.00
PFDoA_2	613.0 / 319.0	3.58	13C2-PFDoA	615.0 / 570.0	111948.93	250.00
PFTrDA_1	663.0 / 619.0	4.20	13C2-PFTeDA	715.0 / 670.0	94763.49	250.00
PFTrDA_2	663.0 / 169.0	4.20	13C2-PFTeDA	715.0 / 670.0	94763.49	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	94763.49	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	94763.49	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	52028.65	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	52028.65	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18805.69	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18805.69	250.00

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Summary Internal Standard Report

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Sample Name	J8354-FS-D(5)	**Injection Vial**	34
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:05:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	29358.63	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	29358.63	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	69186.51	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	69186.51	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	72637.47	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	72637.47	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	24245.91	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	24245.91	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	97058.70	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	97058.70	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	85825.10	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	85825.10	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	30222.79	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	30222.79	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	85945.71	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	85945.71	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	93097.43	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	93097.43	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	91689.10	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	91689.10	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	77204.30	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	77204.30	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	77204.30	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	77204.30	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14035.67	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14035.67	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	19210.81	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	19210.81	250.00

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Summary Internal Standard Report

Sample Name	J8355-FS(3)	**Injection Vial**	35
Sample ID	VC-PM323-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:16:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	35729.76	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	35729.76	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	75623.11	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	75623.11	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	85149.67	250.00
PFHpA_2	363.0 / 169.0	2.24	13C4-PFHpA	367.0 / 322.0	85149.67	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	28771.69	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	28771.69	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	110913.47	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	110913.47	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	100312.03	250.00
PFNA_2	463.0 / 219.0	3.05	13C9-PFNA	472.0 / 427.0	100312.03	250.00
PFOS_1	499.0 / 80.0	3.07	13C8-PFOS	507.0 / 99.0	34611.02	239.25
PFOS_2	499.0 / 99.0	3.07	13C8-PFOS	507.0 / 99.0	34611.02	239.25
PFDA_1	513.0 / 469.0	3.43	13C6-PFDA	519.0 / 474.0	118921.83	250.00
PFDA_2	513.0 / 219.0	3.36	13C6-PFDA	519.0 / 474.0	118921.83	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	112727.04	250.00
PFUnA_2	563.0 / 269.0	3.74	13C7-PFUnA	570.0 / 525.0	112727.04	250.00
PFDoA_1	613.0 / 569.0	4.03	13C2-PFDoA	615.0 / 570.0	110915.59	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	110915.59	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	88474.38	250.00
PFTrDA_2	663.0 / 169.0	4.19	13C2-PFTeDA	715.0 / 670.0	88474.38	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	88474.38	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	88474.38	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	11474.53	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	11474.53	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16539.02	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16539.02	250.00

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Summary Internal Standard Report

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Sample Name	J8356-FS(3)	**Injection Vial**	36
Sample ID	VC-PM323-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:27:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	33893.92	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	33893.92	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	84167.78	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	84167.78	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	94452.02	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	94452.02	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	28321.93	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	28321.93	236.50
PFOA_1	413.0 / 369.0	2.67	13C8-PFOA	421.0 / 376.0	111775.18	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	111775.18	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	117685.71	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	117685.71	250.00
PFOS_1	499.0 / 80.0	3.01	13C8-PFOS	507.0 / 99.0	35356.82	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	35356.82	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	126448.30	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	126448.30	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	126932.40	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	126932.40	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	117290.88	250.00
PFDoA_2	613.0 / 319.0	4.04	13C2-PFDoA	615.0 / 570.0	117290.88	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	98671.51	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	98671.51	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	98671.51	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	98671.51	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15992.70	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15992.70	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18271.97	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18271.97	250.00

Sample Name	J8357-FS(3)	**Injection Vial**	39
Sample ID	VC-PM323-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:59:44	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	32952.21	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	32952.21	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	76993.24	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	76993.24	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	84706.85	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	84706.85	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	30590.09	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	30590.09	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	105141.14	250.00
PFOA_2	413.0 / 169.0	2.63	13C8-PFOA	421.0 / 376.0	105141.14	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	106813.56	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	106813.56	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	31427.18	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	31427.18	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	118551.62	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	118551.62	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	116810.76	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	116810.76	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	115399.64	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	115399.64	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	95778.45	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	95778.45	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	95778.45	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	95778.45	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16543.30	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16543.30	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18960.84	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18960.84	250.00

Sample Name	J8360-FS(3)	**Injection Vial**	40
Sample ID	VC-PM324-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:10:35	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	32490.11	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	32490.11	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	80782.29	250.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	80782.29	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	87707.93	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	87707.93	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	30102.14	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	30102.14	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	112721.16	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	112721.16	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	113526.56	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	113526.56	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	36980.27	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	36980.27	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	121211.66	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	121211.66	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	124185.70	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	124185.70	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	121744.03	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	121744.03	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	101299.46	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	101299.46	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	101299.46	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	101299.46	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	17731.25	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	17731.25	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18610.17	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18610.17	250.00

Sample Name	J8361-FS(3)	**Injection Vial**	41
Sample ID	VC-PM324-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:21:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	37140.98	232.25
PFBS_2	298.9 / 99.0	1.51	13C3-PFBS	302.0 / 99.0	37140.98	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	87748.62	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	87748.62	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	100319.22	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	100319.22	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	31290.32	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	31290.32	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	117490.09	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	117490.09	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	119622.73	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	119622.73	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	35645.55	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	35645.55	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	131047.04	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	131047.04	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	132209.80	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	132209.80	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	119569.94	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	119569.94	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	104765.14	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	104765.14	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	104765.14	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	104765.14	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	19389.65	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	19389.65	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	22215.60	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	22215.60	250.00

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Summary Internal Standard Report

Sample Name	J8362-FS(3)	**Injection Vial**	42
Sample ID	VC-PM324-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:32:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	34073.54	232.25
PFBS_2	298.9 / 99.0	1.51	13C3-PFBS	302.0 / 99.0	34073.54	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	77928.64	250.00
PFHxA_2	313.0 / 119.0	1.83	13C5-PFHxA	318.0 / 273.0	77928.64	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	82851.69	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	82851.69	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	26053.01	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	26053.01	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	111803.14	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	111803.14	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	115319.58	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	115319.58	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	31811.82	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	31811.82	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	123848.62	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	123848.62	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	126594.41	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	126594.41	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	117432.43	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	117432.43	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	90614.60	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	90614.60	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	90614.60	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	90614.60	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	19076.14	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	19076.14	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	21108.07	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	21108.07	250.00

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Summary Internal Standard Report

Sample Name	J8363-FS(3)	**Injection Vial**	43
Sample ID	VC-PM324-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:43:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	36020.37	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	36020.37	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	74857.18	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	74857.18	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	85656.00	250.00
PFHpA_2	363.0 / 169.0	2.24	13C4-PFHpA	367.0 / 322.0	85656.00	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	31298.19	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	31298.19	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	113861.37	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	113861.37	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	107272.44	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	107272.44	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	34623.37	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	34623.37	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	122771.58	250.00
PFDA_2	513.0 / 219.0	3.46	13C6-PFDA	519.0 / 474.0	122771.58	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	129514.50	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	129514.50	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	119933.96	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	119933.96	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	99751.19	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	99751.19	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	99751.19	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	99751.19	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15349.29	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15349.29	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	19258.25	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	19258.25	250.00

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Summary Internal Standard Report

Sample Name	J8364-FS(3)	**Injection Vial**	44
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:54:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	35096.81	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	35096.81	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	87592.95	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	87592.95	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	92434.77	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	92434.77	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	31551.84	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	31551.84	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	123001.39	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	123001.39	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	110945.45	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	110945.45	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	34353.21	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	34353.21	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	136078.01	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	136078.01	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	129237.73	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	129237.73	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	123593.93	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	123593.93	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	104881.28	250.00
PFTrDA_2	663.0 / 169.0	4.19	13C2-PFTeDA	715.0 / 670.0	104881.28	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	104881.28	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	104881.28	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16432.50	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16432.50	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	21021.19	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	21021.19	250.00

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Summary Internal Standard Report

Sample Name	J8364-FS-D(5)	**Injection Vial**	45
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:04:56	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	29891.98	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	29891.98	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	70100.80	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	70100.80	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	75871.28	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	75871.28	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	26562.39	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	26562.39	236.50
PFOA_1	413.0 / 369.0	N/A	13C8-PFOA	421.0 / 376.0	101465.60	250.00
PFOA_2	413.0 / 169.0	N/A	13C8-PFOA	421.0 / 376.0	101465.60	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	105974.25	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	105974.25	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	31478.13	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	31478.13	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	105460.24	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	105460.24	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	105102.99	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	105102.99	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	103192.56	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	103192.56	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	85300.75	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	85300.75	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	85300.75	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	85300.75	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15459.58	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15459.58	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	17315.10	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	17315.10	250.00

Sample Name	J8365-FS(3)	**Injection Vial**	46
Sample ID	VC-PM324-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:15:48	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	36446.96	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	36446.96	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	83369.49	250.00
PFHxA_2	313.0 / 119.0	1.86	13C5-PFHxA	318.0 / 273.0	83369.49	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	99158.51	250.00
PFHpA_2	363.0 / 169.0	2.29	13C4-PFHpA	367.0 / 322.0	99158.51	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	33739.94	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	33739.94	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	130945.52	250.00
PFOA_2	413.0 / 169.0	2.65	13C8-PFOA	421.0 / 376.0	130945.52	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	127448.34	250.00
PFNA_2	463.0 / 219.0	3.08	13C9-PFNA	472.0 / 427.0	127448.34	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	38882.75	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	38882.75	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	135805.44	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	135805.44	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	133129.81	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	133129.81	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	133870.07	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	133870.07	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	108043.75	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	108043.75	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	108043.75	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	108043.75	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	18559.37	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	18559.37	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	24552.47	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	24552.47	250.00

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Summary Internal Standard Report

Sample Name	J8366MS-FS(3)	**Injection Vial**	47
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:26:41	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	39742.98	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	39742.98	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	83143.91	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	83143.91	250.00
PFHpA_1	363.0 / 319.0	2.26	13C4-PFHpA	367.0 / 322.0	90231.55	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	90231.55	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	30217.62	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	30217.62	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	104571.52	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	104571.52	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	109727.05	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	109727.05	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	30567.30	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	30567.30	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	115267.86	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	115267.86	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	118482.59	250.00
PFUnA_2	563.0 / 269.0	3.74	13C7-PFUnA	570.0 / 525.0	118482.59	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	135505.96	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	135505.96	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	110610.55	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	110610.55	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	110610.55	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	110610.55	250.00
NMeFOSAA_1	570.0 / 419.0	3.57	d3-MeFOSAA	573.0 / 419.0	21796.58	250.00
NMeFOSAA_2	570.0 / 512.0	3.57	d3-MeFOSAA	573.0 / 419.0	21796.58	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	20144.02	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	20144.02	250.00

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Summary Internal Standard Report

Sample Name	J8366MS-FS-D(5)	**Injection Vial**	48
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:37:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	28929.11	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	28929.11	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	67813.42	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	67813.42	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	75181.63	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	75181.63	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	24172.64	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	24172.64	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	94684.74	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	94684.74	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	95887.18	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	95887.18	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	26562.33	239.25
PFOS_2	499.0 / 99.0	3.05	13C8-PFOS	507.0 / 99.0	26562.33	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	98701.11	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	98701.11	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	95579.55	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	95579.55	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	102014.82	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	102014.82	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	76489.22	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76489.22	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	76489.22	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	76489.22	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16534.79	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16534.79	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18331.37	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18331.37	250.00

Sample Name	J8367MSD-FS(3)	**Injection Vial**	51
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:10:07	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	39285.95	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	39285.95	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	81318.64	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	81318.64	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	91745.80	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	91745.80	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	30306.69	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	30306.69	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	96668.59	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	96668.59	250.00
PFNA_1	463.0 / 419.0	3.05	13C9-PFNA	472.0 / 427.0	103389.82	250.00
PFNA_2	463.0 / 219.0	3.05	13C9-PFNA	472.0 / 427.0	103389.82	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	30511.21	239.25
PFOS_2	499.0 / 99.0	3.05	13C8-PFOS	507.0 / 99.0	30511.21	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	108304.38	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	108304.38	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	116787.69	250.00
PFUnA_2	563.0 / 269.0	3.73	13C7-PFUnA	570.0 / 525.0	116787.69	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	121909.45	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	121909.45	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	103984.78	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	103984.78	250.00
PFTeDA_1	713.0 / 669.0	4.48	13C2-PFTeDA	715.0 / 670.0	103984.78	250.00
PFTeDA_2	713.0 / 169.0	4.48	13C2-PFTeDA	715.0 / 670.0	103984.78	250.00
NMeFOSAA_1	570.0 / 419.0	3.56	d3-MeFOSAA	573.0 / 419.0	19471.94	250.00
NMeFOSAA_2	570.0 / 512.0	3.56	d3-MeFOSAA	573.0 / 419.0	19471.94	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	17264.05	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	17264.05	250.00

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Summary Internal Standard Report

Sample Name	J8367MSD-FS-D(5)	**Injection Vial**	52
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:20:59	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	27618.81	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	27618.81	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	64801.01	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	64801.01	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	68763.89	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	68763.89	250.00
PFHxS_1	399.0 / 80.0	N/A	13C3-PFHxS	402.0 / 99.0	23362.87	236.50
PFHxS_2	399.0 / 99.0	N/A	13C3-PFHxS	402.0 / 99.0	23362.87	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	89890.04	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	89890.04	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	91294.01	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	91294.01	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	30950.84	239.25
PFOS_2	499.0 / 99.0	3.05	13C8-PFOS	507.0 / 99.0	30950.84	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	94820.71	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	94820.71	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	96618.84	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	96618.84	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	92862.72	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	92862.72	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	78705.69	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	78705.69	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	78705.69	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	78705.69	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16076.84	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16076.84	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	16521.38	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	16521.38	250.00

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Summary Internal Standard Report

Sample Name	J8373-FS(3)	**Injection Vial**	53
Sample ID	VC-PM64B-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:31:50	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	35250.34	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	35250.34	232.25
PFHxA_1	313.0 / 269.0	1.85	13C5-PFHxA	318.0 / 273.0	79952.82	250.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	79952.82	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	91401.41	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	91401.41	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	31731.88	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	31731.88	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	117495.66	250.00
PFOA_2	413.0 / 169.0	2.68	13C8-PFOA	421.0 / 376.0	117495.66	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	113593.41	250.00
PFNA_2	463.0 / 219.0	3.07	13C9-PFNA	472.0 / 427.0	113593.41	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	36079.87	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	36079.87	239.25
PFDA_1	513.0 / 469.0	3.42	13C6-PFDA	519.0 / 474.0	120915.62	250.00
PFDA_2	513.0 / 219.0	3.40	13C6-PFDA	519.0 / 474.0	120915.62	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	126568.71	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	126568.71	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	125720.23	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	125720.23	250.00
PFTrDA_1	663.0 / 619.0	4.27	13C2-PFTeDA	715.0 / 670.0	98118.84	250.00
PFTrDA_2	663.0 / 169.0	4.26	13C2-PFTeDA	715.0 / 670.0	98118.84	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	98118.84	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	98118.84	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	18643.07	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	18643.07	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	22357.32	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	22357.32	250.00

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Summary Internal Standard Report

Sample Name	J8374-FS(3)	**Injection Vial**	54
Sample ID	VC-PM64B-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:42:42	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	30880.65	232.25
PFBS_2	298.9 / 99.0	1.50	13C3-PFBS	302.0 / 99.0	30880.65	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	68711.32	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	68711.32	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	83413.73	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	83413.73	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	26910.62	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	26910.62	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	102980.51	250.00
PFOA_2	413.0 / 169.0	2.64	13C8-PFOA	421.0 / 376.0	102980.51	250.00
PFNA_1	463.0 / 419.0	3.07	13C9-PFNA	472.0 / 427.0	100177.33	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	100177.33	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	33507.89	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	33507.89	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	104370.24	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	104370.24	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	106408.39	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	106408.39	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	102972.63	250.00
PFDoA_2	613.0 / 319.0	4.03	13C2-PFDoA	615.0 / 570.0	102972.63	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	84798.21	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	84798.21	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	84798.21	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	84798.21	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	15072.10	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	15072.10	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	18501.56	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	18501.56	250.00

Sample Name	J8375-FS(3)	**Injection Vial**	1
Sample ID	VC-PM64B-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:53:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	41220.42	232.25
PFBS_2	298.9 / 99.0	N/A	13C3-PFBS	302.0 / 99.0	41220.42	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	81364.04	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	81364.04	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	93791.53	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	93791.53	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	32169.77	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	32169.77	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	118506.83	250.00
PFOA_2	413.0 / 169.0	2.56	13C8-PFOA	421.0 / 376.0	118506.83	250.00
PFNA_1	463.0 / 419.0	N/A	13C9-PFNA	472.0 / 427.0	120252.71	250.00
PFNA_2	463.0 / 219.0	N/A	13C9-PFNA	472.0 / 427.0	120252.71	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	40854.37	239.25
PFOS_2	499.0 / 99.0	3.05	13C8-PFOS	507.0 / 99.0	40854.37	239.25
PFDA_1	513.0 / 469.0	N/A	13C6-PFDA	519.0 / 474.0	131420.08	250.00
PFDA_2	513.0 / 219.0	N/A	13C6-PFDA	519.0 / 474.0	131420.08	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	134174.78	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	134174.78	250.00
PFDoA_1	613.0 / 569.0	N/A	13C2-PFDoA	615.0 / 570.0	129017.64	250.00
PFDoA_2	613.0 / 319.0	N/A	13C2-PFDoA	615.0 / 570.0	129017.64	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	106294.49	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	106294.49	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	106294.49	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	106294.49	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	21197.41	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	21197.41	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	24962.09	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	24962.09	250.00

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Summary Internal Standard Report

Sample Name	J8376-FS(3)	**Injection Vial**	2
Sample ID	VC-PM64B-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:04:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	37768.40	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	37768.40	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	78463.14	250.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	78463.14	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	89004.80	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	89004.80	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	34862.46	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	34862.46	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	113619.15	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	113619.15	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	113959.55	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	113959.55	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	38025.29	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	38025.29	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	123240.60	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	123240.60	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	118582.19	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	118582.19	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	127293.37	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	127293.37	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	101695.45	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	101695.45	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	101695.45	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	101695.45	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	18060.61	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	18060.61	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	23001.59	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	23001.59	250.00

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Summary Internal Standard Report

Sample Name	J8377-FS(3)	**Injection Vial**	3
Sample ID	VC-PM64B-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:15:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	38147.75	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	38147.75	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	78445.16	250.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	78445.16	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	92174.79	250.00
PFHpA_2	363.0 / 169.0	2.25	13C4-PFHpA	367.0 / 322.0	92174.79	250.00
PFHxS_1	399.0 / 80.0	2.27	13C3-PFHxS	402.0 / 99.0	31914.81	236.50
PFHxS_2	399.0 / 99.0	2.27	13C3-PFHxS	402.0 / 99.0	31914.81	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	110689.41	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	110689.41	250.00
PFNA_1	463.0 / 419.0	3.05	13C9-PFNA	472.0 / 427.0	99639.54	250.00
PFNA_2	463.0 / 219.0	3.05	13C9-PFNA	472.0 / 427.0	99639.54	250.00
PFOS_1	499.0 / 80.0	3.05	13C8-PFOS	507.0 / 99.0	35441.27	239.25
PFOS_2	499.0 / 99.0	3.05	13C8-PFOS	507.0 / 99.0	35441.27	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	116536.37	250.00
PFDA_2	513.0 / 219.0	3.41	13C6-PFDA	519.0 / 474.0	116536.37	250.00
PFUnA_1	563.0 / 519.0	3.73	13C7-PFUnA	570.0 / 525.0	81288.67	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	81288.67	250.00
PFDoA_1	613.0 / 569.0	4.01	13C2-PFDoA	615.0 / 570.0	103595.53	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	103595.53	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	103062.93	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103062.93	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	103062.93	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103062.93	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	17034.88	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	17034.88	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	12746.29	250.00
NEtFOSAA_2	584.0 / 483.0	3.73	d5-EtFOSAA	589.0 / 419.0	12746.29	250.00

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Summary Internal Standard Report

Sample Name	J8378-FS(3)	**Injection Vial**	4
Sample ID	VC-PM64B-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:26:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	39676.56	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	39676.56	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	65301.16	250.00
PFHxA_2	313.0 / 119.0	1.84	13C5-PFHxA	318.0 / 273.0	65301.16	250.00
PFHpA_1	363.0 / 319.0	2.25	13C4-PFHpA	367.0 / 322.0	83023.35	250.00
PFHpA_2	363.0 / 169.0	2.26	13C4-PFHpA	367.0 / 322.0	83023.35	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	31467.75	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	31467.75	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	113396.60	250.00
PFOA_2	413.0 / 169.0	2.62	13C8-PFOA	421.0 / 376.0	113396.60	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	118833.74	250.00
PFNA_2	463.0 / 219.0	3.05	13C9-PFNA	472.0 / 427.0	118833.74	250.00
PFOS_1	499.0 / 80.0	3.00	13C8-PFOS	507.0 / 99.0	36634.59	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	36634.59	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	131165.39	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	131165.39	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	121549.90	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	121549.90	250.00
PFDoA_1	613.0 / 569.0	4.01	13C2-PFDoA	615.0 / 570.0	126272.85	250.00
PFDoA_2	613.0 / 319.0	4.01	13C2-PFDoA	615.0 / 570.0	126272.85	250.00
PFTrDA_1	663.0 / 619.0	N/A	13C2-PFTeDA	715.0 / 670.0	103027.27	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103027.27	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	103027.27	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	103027.27	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	19006.36	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	19006.36	250.00
NEtFOSAA_1	584.0 / 419.0	N/A	d5-EtFOSAA	589.0 / 419.0	23298.29	250.00
NEtFOSAA_2	584.0 / 483.0	N/A	d5-EtFOSAA	589.0 / 419.0	23298.29	250.00

Sample Name	J8379-FS(3)	**Injection Vial**	5
Sample ID	VC-PM64B-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:37:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	33566.10	232.25
PFBS_2	298.9 / 99.0	1.52	13C3-PFBS	302.0 / 99.0	33566.10	232.25
PFHxA_1	313.0 / 269.0	N/A	13C5-PFHxA	318.0 / 273.0	71740.52	250.00
PFHxA_2	313.0 / 119.0	N/A	13C5-PFHxA	318.0 / 273.0	71740.52	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	85113.18	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	85113.18	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	28300.74	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	28300.74	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	100722.51	250.00
PFOA_2	413.0 / 169.0	2.67	13C8-PFOA	421.0 / 376.0	100722.51	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	105645.40	250.00
PFNA_2	463.0 / 219.0	3.06	13C9-PFNA	472.0 / 427.0	105645.40	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	31862.24	239.25
PFOS_2	499.0 / 99.0	3.06	13C8-PFOS	507.0 / 99.0	31862.24	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	119013.06	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	119013.06	250.00
PFUnA_1	563.0 / 519.0	3.74	13C7-PFUnA	570.0 / 525.0	117369.81	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	117369.81	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	115178.70	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	115178.70	250.00
PFTrDA_1	663.0 / 619.0	4.26	13C2-PFTeDA	715.0 / 670.0	91840.21	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	91840.21	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	91840.21	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	91840.21	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	16004.66	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	16004.66	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	18573.96	250.00
NEtFOSAA_2	584.0 / 483.0	3.72	d5-EtFOSAA	589.0 / 419.0	18573.96	250.00

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Summary Internal Standard Report

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Sample Name	J8380-FS(3)	**Injection Vial**	6
Sample ID	VC-PM64B-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:47:58	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	35319.57	232.25
PFBS_2	298.9 / 99.0	1.53	13C3-PFBS	302.0 / 99.0	35319.57	232.25
PFHxA_1	313.0 / 269.0	1.84	13C5-PFHxA	318.0 / 273.0	78963.76	250.00
PFHxA_2	313.0 / 119.0	1.85	13C5-PFHxA	318.0 / 273.0	78963.76	250.00
PFHpA_1	363.0 / 319.0	N/A	13C4-PFHpA	367.0 / 322.0	85125.53	250.00
PFHpA_2	363.0 / 169.0	N/A	13C4-PFHpA	367.0 / 322.0	85125.53	250.00
PFHxS_1	399.0 / 80.0	2.28	13C3-PFHxS	402.0 / 99.0	27978.65	236.50
PFHxS_2	399.0 / 99.0	2.28	13C3-PFHxS	402.0 / 99.0	27978.65	236.50
PFOA_1	413.0 / 369.0	2.66	13C8-PFOA	421.0 / 376.0	110271.54	250.00
PFOA_2	413.0 / 169.0	2.66	13C8-PFOA	421.0 / 376.0	110271.54	250.00
PFNA_1	463.0 / 419.0	3.06	13C9-PFNA	472.0 / 427.0	115463.81	250.00
PFNA_2	463.0 / 219.0	3.05	13C9-PFNA	472.0 / 427.0	115463.81	250.00
PFOS_1	499.0 / 80.0	3.06	13C8-PFOS	507.0 / 99.0	37444.07	239.25
PFOS_2	499.0 / 99.0	3.05	13C8-PFOS	507.0 / 99.0	37444.07	239.25
PFDA_1	513.0 / 469.0	3.41	13C6-PFDA	519.0 / 474.0	125499.70	250.00
PFDA_2	513.0 / 219.0	3.42	13C6-PFDA	519.0 / 474.0	125499.70	250.00
PFUnA_1	563.0 / 519.0	N/A	13C7-PFUnA	570.0 / 525.0	122394.64	250.00
PFUnA_2	563.0 / 269.0	N/A	13C7-PFUnA	570.0 / 525.0	122394.64	250.00
PFDoA_1	613.0 / 569.0	4.02	13C2-PFDoA	615.0 / 570.0	116459.91	250.00
PFDoA_2	613.0 / 319.0	4.02	13C2-PFDoA	615.0 / 570.0	116459.91	250.00
PFTrDA_1	663.0 / 619.0	4.25	13C2-PFTeDA	715.0 / 670.0	94901.54	250.00
PFTrDA_2	663.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	94901.54	250.00
PFTeDA_1	713.0 / 669.0	N/A	13C2-PFTeDA	715.0 / 670.0	94901.54	250.00
PFTeDA_2	713.0 / 169.0	N/A	13C2-PFTeDA	715.0 / 670.0	94901.54	250.00
NMeFOSAA_1	570.0 / 419.0	N/A	d3-MeFOSAA	573.0 / 419.0	14262.92	250.00
NMeFOSAA_2	570.0 / 512.0	N/A	d3-MeFOSAA	573.0 / 419.0	14262.92	250.00
NEtFOSAA_1	584.0 / 419.0	3.73	d5-EtFOSAA	589.0 / 419.0	18515.59	250.00
NEtFOSAA_2	584.0 / 483.0	3.72	d5-EtFOSAA	589.0 / 419.0	18515.59	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	2018-10-08T16:56:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Results Summary

Analyte	MRM Transition	RT	IS	IS MRM Transition	IS Area	IS Conc. (ng/L)
13C2-PFDoA	615.0 / 570.0	4.07	13C2-PFDA	515.0 / 470.0	85865.67	250.00
d3-MeFOSAA	573.0 / 419.0	3.61	13C4-PFOS	503.0 / 99.0	28550.52	239.25
d5-EtFOSAA	589.0 / 419.0	3.77	13C4-PFOS	503.0 / 99.0	28550.52	239.25
13C5-PFHxA	318.0 / 273.0	1.86	13C2-PFOA	415.0 / 370.0	80851.75	250.00
13C4-PFHpA	367.0 / 322.0	2.27	13C2-PFOA	415.0 / 370.0	80851.75	250.00
13C8-PFOA	421.0 / 376.0	2.69	13C2-PFOA	415.0 / 370.0	80851.75	250.00
13C9-PFNA	472.0 / 427.0	3.09	13C2-PFOA	415.0 / 370.0	80851.75	250.00
13C6-PFDA	519.0 / 474.0	3.45	13C2-PFDA	515.0 / 470.0	85865.67	250.00
13C7-PFUnA	570.0 / 525.0	3.77	13C2-PFDA	515.0 / 470.0	85865.67	250.00
13C2-PFTeDA	715.0 / 670.0	4.54	13C2-PFDA	515.0 / 470.0	85865.67	250.00
13C3-PFBS	302.0 / 99.0	1.54	13C4-PFOS	503.0 / 99.0	28550.52	239.25
13C3-PFHxS	402.0 / 99.0	2.30	13C4-PFOS	503.0 / 99.0	28550.52	239.25
13C8-PFOS	507.0 / 99.0	3.08	13C4-PFOS	503.0 / 99.0	28550.52	239.25

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Summary Internal Standard Report

Sample Name	CR892PB-FS(3)	**Injection Vial**	27
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:49:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	91995.31	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	25377.92	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	25377.92	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	81275.08	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	81275.08	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	81275.08	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	81275.08	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	91995.31	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	91995.31	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	91995.31	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	25377.92	239.25
13C3-PFHxS	402.0 / 99.0	2.28	13C4-PFOS	503.0 / 99.0	25377.92	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	25377.92	239.25

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Summary Internal Standard Report

Sample Name	CR893LCS-FS(3)	**Injection Vial**	28
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:00:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	106895.03	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	31440.48	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	31440.48	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	86442.69	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	86442.69	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	86442.69	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	86442.69	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	106895.03	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	106895.03	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	106895.03	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	31440.48	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	31440.48	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	31440.48	239.25

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Summary Internal Standard Report

Sample Name	J8352-FS(3)	**Injection Vial**	29
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:11:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	51403.92	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	22634.61	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	22634.61	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	76698.75	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	76698.75	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	76698.75	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	76698.75	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	51403.92	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	51403.92	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	51403.92	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	22634.61	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	22634.61	239.25
13C8-PFOS	507.0 / 99.0	3.06	13C4-PFOS	503.0 / 99.0	22634.61	239.25

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Summary Internal Standard Report

Sample Name	J8352-FS-D(5)	**Injection Vial**	30
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:22:03	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	89508.25	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	29222.83	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	29222.83	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	102604.75	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	102604.75	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	102604.75	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	102604.75	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	89508.25	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	89508.25	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	89508.25	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	29222.83	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	29222.83	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	29222.83	239.25

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Summary Internal Standard Report

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Sample Name	J8353-FS(3)	**Injection Vial**	31
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:32:55	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	98260.87	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	26649.07	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	26649.07	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	96141.10	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	96141.10	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	96141.10	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	96141.10	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	98260.87	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	98260.87	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	98260.87	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	26649.07	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	26649.07	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	26649.07	239.25

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Summary Internal Standard Report

Sample Name	J8353-FS-D(5)	**Injection Vial**	32
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:43:46	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	115693.48	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	31658.45	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	31658.45	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	101025.99	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	101025.99	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	101025.99	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	101025.99	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	115693.48	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	115693.48	250.00
13C2-PFTeDA	715.0 / 670.0	4.49	13C2-PFDA	515.0 / 470.0	115693.48	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	31658.45	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	31658.45	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	31658.45	239.25

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Summary Internal Standard Report

Sample Name	J8354-FS(3)	**Injection Vial**	33
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:54:37	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	59819.88	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	23514.85	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	23514.85	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	85853.59	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	85853.59	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	85853.59	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	85853.59	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	59819.88	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	59819.88	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	59819.88	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	23514.85	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	23514.85	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	23514.85	239.25

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Summary Internal Standard Report

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Sample Name	J8354-FS-D(5)	**Injection Vial**	34
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:05:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	89143.72	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	29487.21	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	29487.21	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	100319.87	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	100319.87	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	100319.87	250.00
13C9-PFNA	472.0 / 427.0	3.06	13C2-PFOA	415.0 / 370.0	100319.87	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	89143.72	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	89143.72	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	89143.72	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	29487.21	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	29487.21	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	29487.21	239.25

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Summary Internal Standard Report

Sample Name	J8355-FS(3)	**Injection Vial**	35
Sample ID	VC-PM323-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:16:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	112697.33	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	30178.09	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30178.09	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	90628.15	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	90628.15	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	90628.15	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	90628.15	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	112697.33	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	112697.33	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	112697.33	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30178.09	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30178.09	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	30178.09	239.25

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Summary Internal Standard Report

Sample Name	J8356-FS(3)	**Injection Vial**	36
Sample ID	VC-PM323-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:27:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	121060.05	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	27996.20	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	27996.20	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	100653.09	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	100653.09	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	100653.09	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	100653.09	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	121060.05	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	121060.05	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	121060.05	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27996.20	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	27996.20	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	27996.20	239.25

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Summary Internal Standard Report

Sample Name	J8357-FS(3)	**Injection Vial**	39
Sample ID	VC-PM323-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:59:44	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	104083.51	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	30768.63	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30768.63	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	85749.99	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	85749.99	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	85749.99	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	85749.99	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	104083.51	250.00
13C7-PFUnA	570.0 / 525.0	3.73	13C2-PFDA	515.0 / 470.0	104083.51	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	104083.51	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30768.63	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30768.63	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	30768.63	239.25

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Summary Internal Standard Report

Sample Name	J8360-FS(3)	**Injection Vial**	40
Sample ID	VC-PM324-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:10:35	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	105158.79	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	33406.43	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	33406.43	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	92561.60	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	92561.60	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	92561.60	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	92561.60	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	105158.79	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	105158.79	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	105158.79	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	33406.43	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	33406.43	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	33406.43	239.25

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Summary Internal Standard Report

Sample Name	J8361-FS(3)	**Injection Vial**	41
Sample ID	VC-PM324-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:21:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	118464.28	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	30854.32	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	30854.32	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	106284.61	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	106284.61	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	106284.61	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	106284.61	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	118464.28	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	118464.28	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	118464.28	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	30854.32	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30854.32	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	30854.32	239.25

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Summary Internal Standard Report

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Sample Name	J8362-FS(3)	**Injection Vial**	42
Sample ID	VC-PM324-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:32:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	105569.54	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	29619.61	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	29619.61	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	94655.33	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	94655.33	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	94655.33	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	94655.33	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	105569.54	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	105569.54	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	105569.54	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	29619.61	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	29619.61	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	29619.61	239.25

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Summary Internal Standard Report

Sample Name	J8363-FS(3)	**Injection Vial**	43
Sample ID	VC-PM324-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:43:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	111483.71	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	30633.00	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	30633.00	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	102129.50	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	102129.50	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	102129.50	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	102129.50	250.00
13C6-PFDA	519.0 / 474.0	3.41	13C2-PFDA	515.0 / 470.0	111483.71	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	111483.71	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	111483.71	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30633.00	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30633.00	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	30633.00	239.25

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Summary Internal Standard Report

Sample Name	J8364-FS(3)	**Injection Vial**	44
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:54:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	120398.41	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	30126.16	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	30126.16	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	97783.29	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	97783.29	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	97783.29	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	97783.29	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	120398.41	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	120398.41	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	120398.41	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	30126.16	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	30126.16	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	30126.16	239.25

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Summary Internal Standard Report

Sample Name	J8364-FS-D(5)	**Injection Vial**	45
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:04:56	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	121862.77	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	35775.26	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	35775.26	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	95346.14	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	95346.14	250.00
13C8-PFOA	421.0 / 376.0	2.66	13C2-PFOA	415.0 / 370.0	95346.14	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	95346.14	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	121862.77	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	121862.77	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	121862.77	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	35775.26	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	35775.26	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	35775.26	239.25

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Summary Internal Standard Report

Sample Name	J8365-FS(3)	**Injection Vial**	46
Sample ID	VC-PM324-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:15:48	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	127762.97	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	32763.58	239.25
d5-EtFOSAA	589.0 / 419.0	3.73	13C4-PFOS	503.0 / 99.0	32763.58	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	106886.05	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	106886.05	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	106886.05	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	106886.05	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	127762.97	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	127762.97	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	127762.97	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	32763.58	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	32763.58	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	32763.58	239.25

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Summary Internal Standard Report

Sample Name	J8366MS-FS(3)	**Injection Vial**	47
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:26:41	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	102924.31	250.00
d3-MeFOSAA	573.0 / 419.0	3.57	13C4-PFOS	503.0 / 99.0	28023.93	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	28023.93	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	91504.82	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	91504.82	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	91504.82	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	91504.82	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	102924.31	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	102924.31	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	102924.31	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	28023.93	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	28023.93	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	28023.93	239.25

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Summary Internal Standard Report

Sample Name	J8366MS-FS-D(5)	**Injection Vial**	48
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:37:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4.00	13C2-PFDA	515.0 / 470.0	107677.55	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	27686.59	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	27686.59	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	88813.91	250.00
13C4-PFHpA	367.0 / 322.0	2.25	13C2-PFOA	415.0 / 370.0	88813.91	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	88813.91	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	88813.91	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	107677.55	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	107677.55	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	107677.55	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	27686.59	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	27686.59	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	27686.59	239.25

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Summary Internal Standard Report

Sample Name	J8367MSD-FS(3)	**Injection Vial**	51
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:10:07	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	101879.35	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	25665.36	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	25665.36	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	87897.02	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	87897.02	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	87897.02	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	87897.02	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	101879.35	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	101879.35	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	101879.35	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	25665.36	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	25665.36	239.25
13C8-PFOS	507.0 / 99.0	3.03	13C4-PFOS	503.0 / 99.0	25665.36	239.25

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Summary Internal Standard Report

Sample Name	J8367MSD-FS-D(5)	**Injection Vial**	52
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:20:59	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4.00	13C2-PFDA	515.0 / 470.0	108954.11	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	27794.59	239.25
d5-EtFOSAA	589.0 / 419.0	3.71	13C4-PFOS	503.0 / 99.0	27794.59	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	97907.46	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	97907.46	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	97907.46	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	97907.46	250.00
13C6-PFDA	519.0 / 474.0	3.39	13C2-PFDA	515.0 / 470.0	108954.11	250.00
13C7-PFUnA	570.0 / 525.0	3.71	13C2-PFDA	515.0 / 470.0	108954.11	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	108954.11	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	27794.59	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	27794.59	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	27794.59	239.25

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Summary Internal Standard Report

Sample Name	J8373-FS(3)	**Injection Vial**	53
Sample ID	VC-PM64B-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:31:50	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	111209.64	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	29707.78	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	29707.78	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	99714.81	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	99714.81	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	99714.81	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	99714.81	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	111209.64	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	111209.64	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	111209.64	250.00
13C3-PFBS	302.0 / 99.0	1.52	13C4-PFOS	503.0 / 99.0	29707.78	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	29707.78	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	29707.78	239.25

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Summary Internal Standard Report

Sample Name	J8374-FS(3)	**Injection Vial**	54
Sample ID	VC-PM64B-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:42:42	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	100963.37	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	27204.94	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	27204.94	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	82063.26	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	82063.26	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	82063.26	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	82063.26	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	100963.37	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	100963.37	250.00
13C2-PFTeDA	715.0 / 670.0	4.48	13C2-PFDA	515.0 / 470.0	100963.37	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	27204.94	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	27204.94	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	27204.94	239.25

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Summary Internal Standard Report

Sample Name	J8375-FS(3)	**Injection Vial**	1
Sample ID	VC-PM64B-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:53:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4.00	13C2-PFDA	515.0 / 470.0	118517.23	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	36015.05	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	36015.05	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	106524.38	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	106524.38	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	106524.38	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	106524.38	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	118517.23	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	118517.23	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	118517.23	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	36015.05	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	36015.05	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	36015.05	239.25

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Summary Internal Standard Report

Sample Name	J8376-FS(3)	**Injection Vial**	2
Sample ID	VC-PM64B-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:04:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	97703.09	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	28712.39	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	28712.39	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	89784.56	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	89784.56	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	89784.56	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	89784.56	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	97703.09	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	97703.09	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	97703.09	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	28712.39	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	28712.39	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	28712.39	239.25

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Summary Internal Standard Report

Sample Name	J8377-FS(3)	**Injection Vial**	3
Sample ID	VC-PM64B-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:15:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4.00	13C2-PFDA	515.0 / 470.0	98421.11	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	25322.12	239.25
d5-EtFOSAA	589.0 / 419.0	3.71	13C4-PFOS	503.0 / 99.0	25322.12	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	85636.60	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	85636.60	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	85636.60	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	85636.60	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	98421.11	250.00
13C7-PFUnA	570.0 / 525.0	3.71	13C2-PFDA	515.0 / 470.0	98421.11	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	98421.11	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	25322.12	239.25
13C3-PFHxS	402.0 / 99.0	2.26	13C4-PFOS	503.0 / 99.0	25322.12	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	25322.12	239.25

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Summary Internal Standard Report

Sample Name	J8378-FS(3)	**Injection Vial**	4
Sample ID	VC-PM64B-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:26:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	113882.66	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	32036.69	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	32036.69	239.25
13C5-PFHxA	318.0 / 273.0	1.83	13C2-PFOA	415.0 / 370.0	92647.99	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	92647.99	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	92647.99	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	92647.99	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	113882.66	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	113882.66	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	113882.66	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	32036.69	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	32036.69	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	32036.69	239.25

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Summary Internal Standard Report

Sample Name	J8379-FS(3)	**Injection Vial**	5
Sample ID	VC-PM64B-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:37:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	99843.41	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	27307.97	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	27307.97	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	83619.04	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	83619.04	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	83619.04	250.00
13C9-PFNA	472.0 / 427.0	3.05	13C2-PFOA	415.0 / 370.0	83619.04	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	99843.41	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	99843.41	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	99843.41	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	27307.97	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	27307.97	239.25
13C8-PFOS	507.0 / 99.0	3.05	13C4-PFOS	503.0 / 99.0	27307.97	239.25

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Summary Internal Standard Report

Sample Name	J8380-FS(3)	**Injection Vial**	6
Sample ID	VC-PM64B-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:47:58	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_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	4.00	13C2-PFDA	515.0 / 470.0	101412.28	250.00
d3-MeFOSAA	573.0 / 419.0	3.56	13C4-PFOS	503.0 / 99.0	27696.59	239.25
d5-EtFOSAA	589.0 / 419.0	3.72	13C4-PFOS	503.0 / 99.0	27696.59	239.25
13C5-PFHxA	318.0 / 273.0	1.84	13C2-PFOA	415.0 / 370.0	87464.07	250.00
13C4-PFHpA	367.0 / 322.0	2.24	13C2-PFOA	415.0 / 370.0	87464.07	250.00
13C8-PFOA	421.0 / 376.0	2.65	13C2-PFOA	415.0 / 370.0	87464.07	250.00
13C9-PFNA	472.0 / 427.0	3.04	13C2-PFOA	415.0 / 370.0	87464.07	250.00
13C6-PFDA	519.0 / 474.0	3.40	13C2-PFDA	515.0 / 470.0	101412.28	250.00
13C7-PFUnA	570.0 / 525.0	3.72	13C2-PFDA	515.0 / 470.0	101412.28	250.00
13C2-PFTeDA	715.0 / 670.0	4.47	13C2-PFDA	515.0 / 470.0	101412.28	250.00
13C3-PFBS	302.0 / 99.0	1.51	13C4-PFOS	503.0 / 99.0	27696.59	239.25
13C3-PFHxS	402.0 / 99.0	2.27	13C4-PFOS	503.0 / 99.0	27696.59	239.25
13C8-PFOS	507.0 / 99.0	3.04	13C4-PFOS	503.0 / 99.0	27696.59	239.25

Chromatograms

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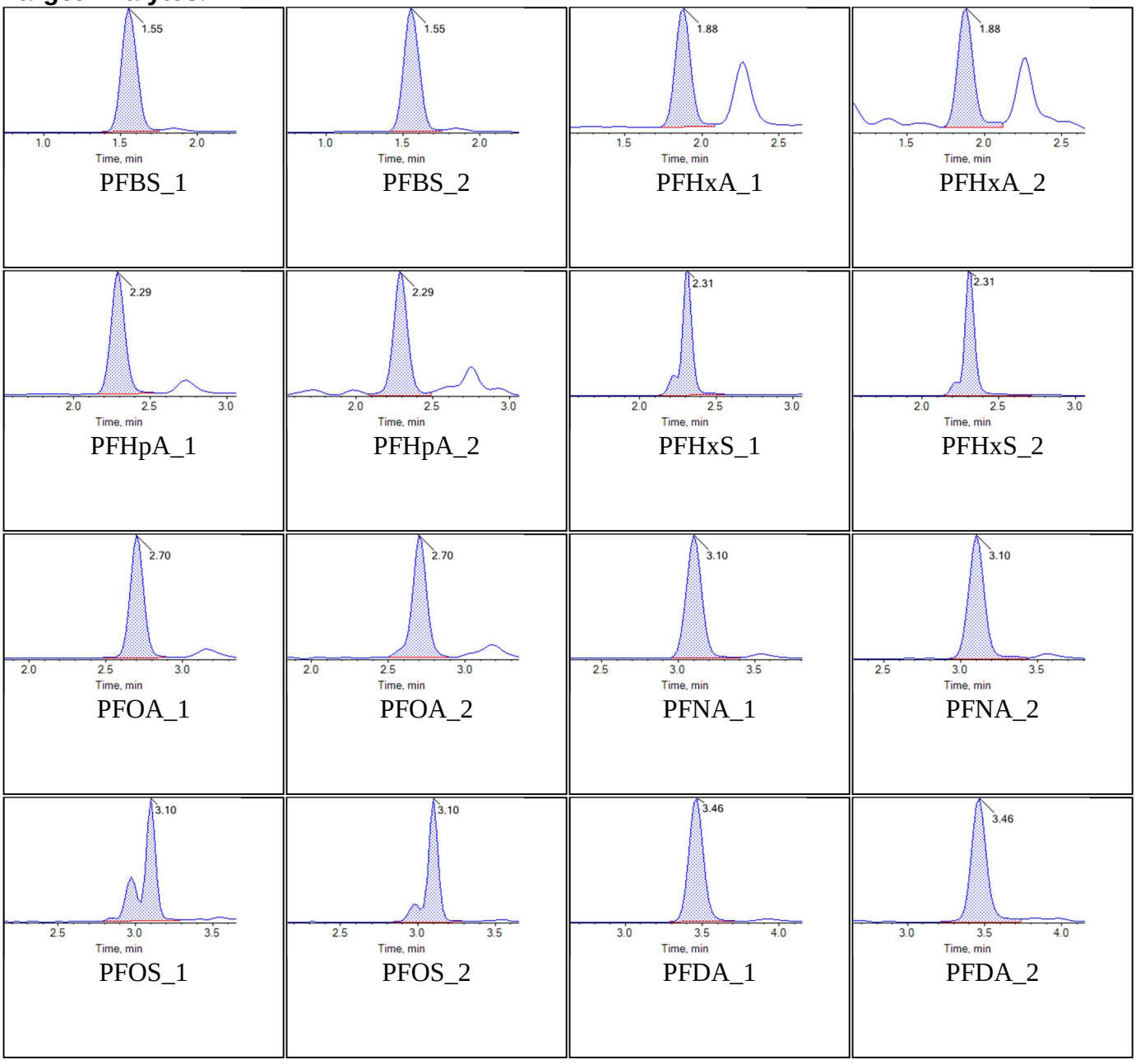
Chromatogram Report

Created with Analyst Reporter
Printed: 09/10/2018 2:25:02 PM

Sample Name	KB81 ICC	**Injection Vial**	10
Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

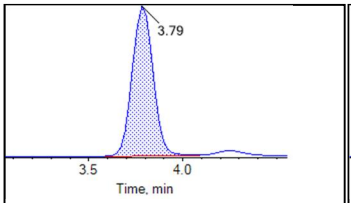
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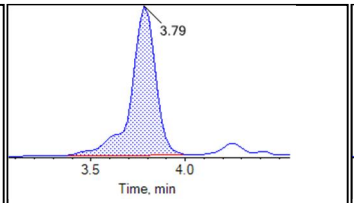
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Chromatogram Report

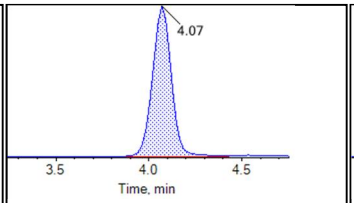
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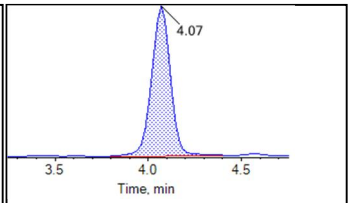
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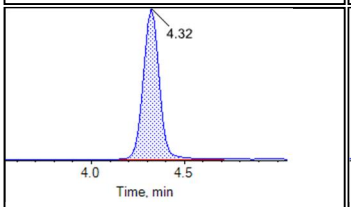
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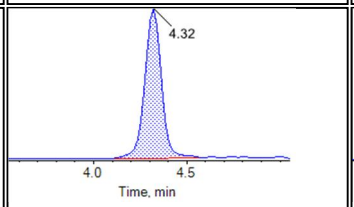
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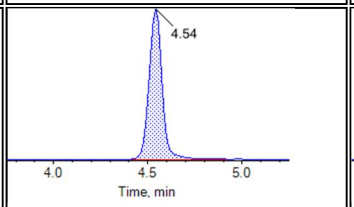
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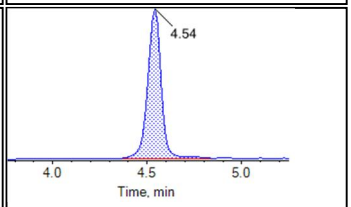
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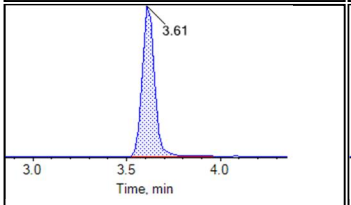
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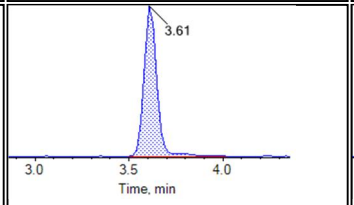
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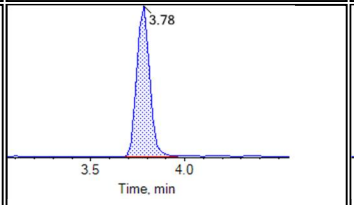
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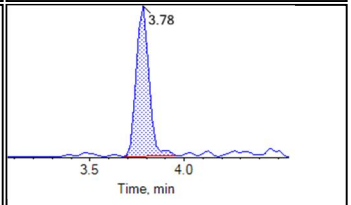
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NMeFOSAA_2

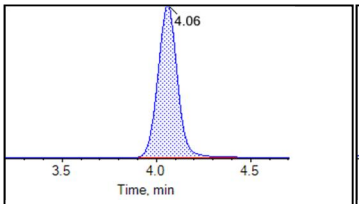


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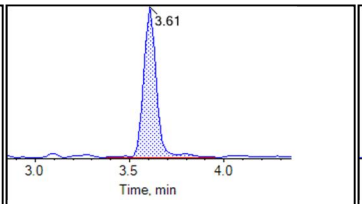


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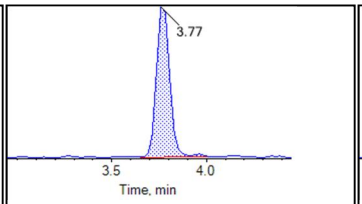
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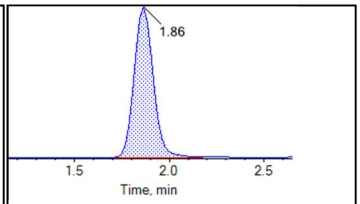
13C2-PFDoA



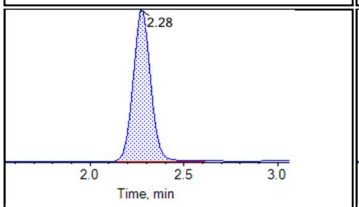
d3-MeFOSAA



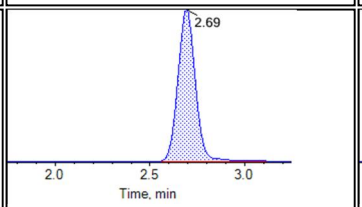
d5-EtFOSAA



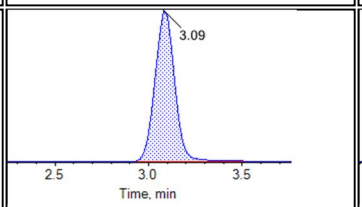
13C5-PFHxA



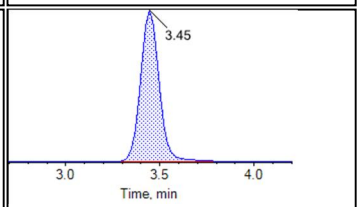
13C4-PFHpA



13C8-PFOA



13C9-PFNA

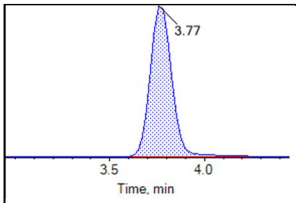


13C6-PFDA

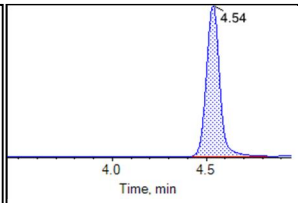
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Chromatogram Report

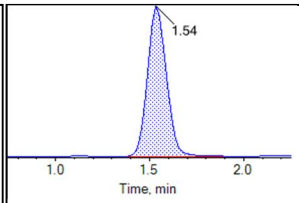
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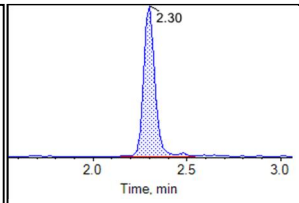
13C7-PFUnA



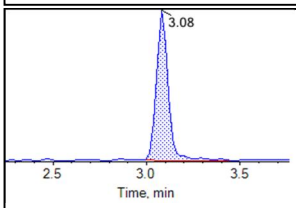
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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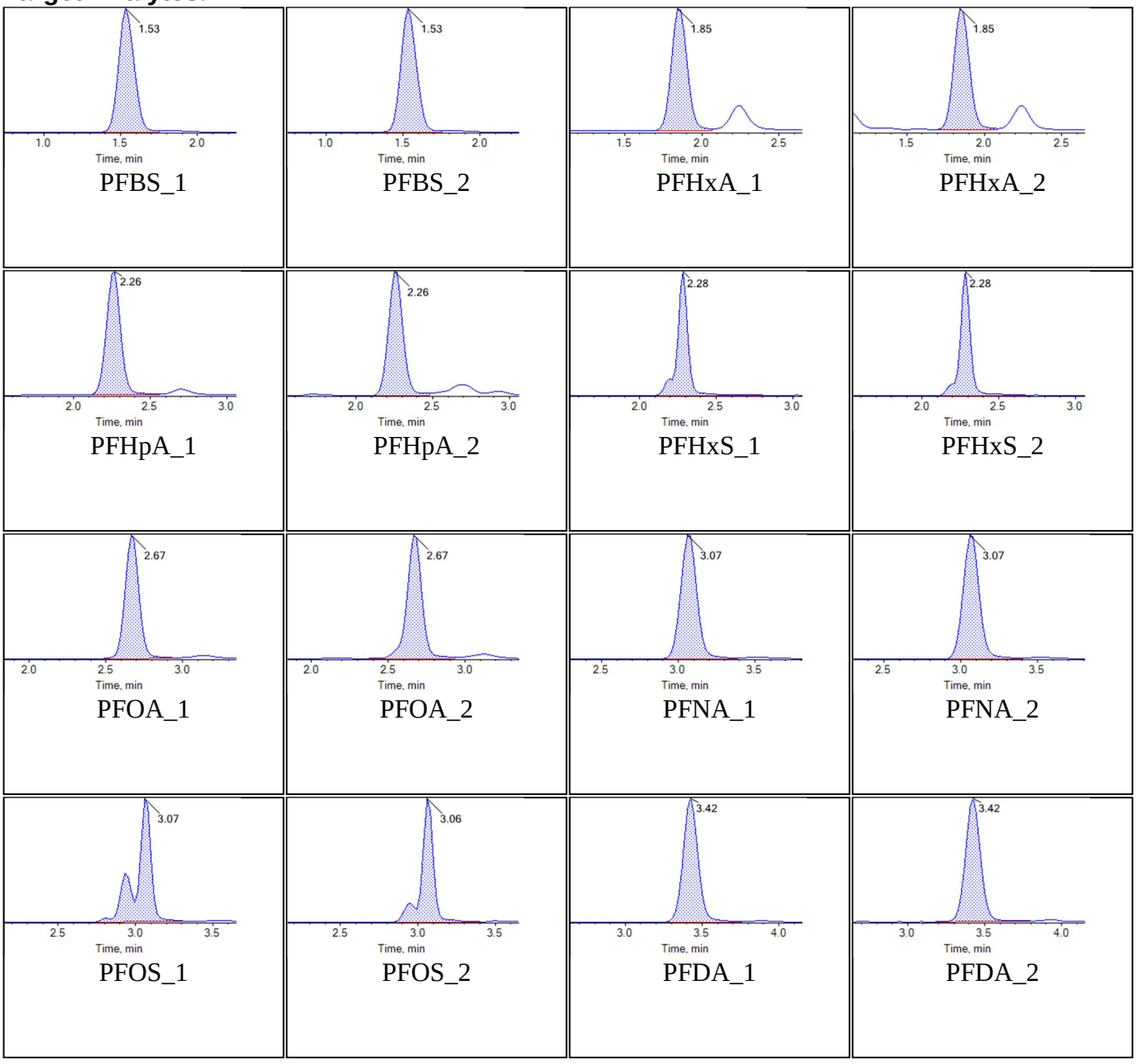
Chromatogram Report

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Printed: 09/10/2018 2:25:17 PM

Sample Name	KB77 CCV	**Injection Vial**	25
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

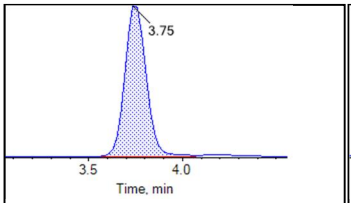
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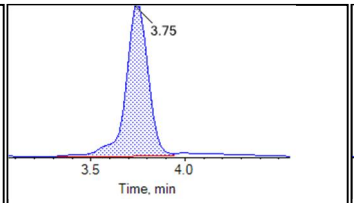
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Chromatogram Report

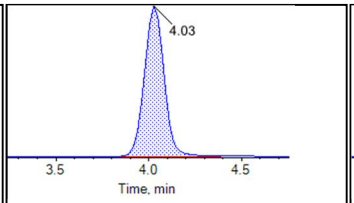
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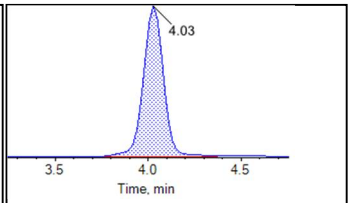
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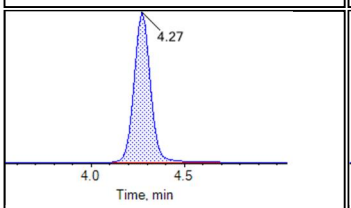
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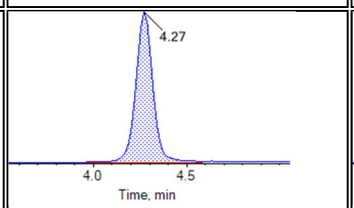
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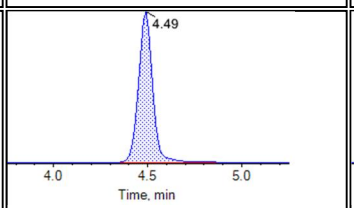
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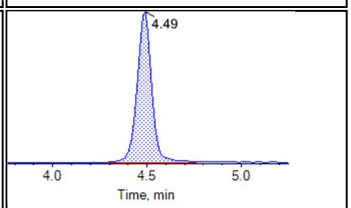
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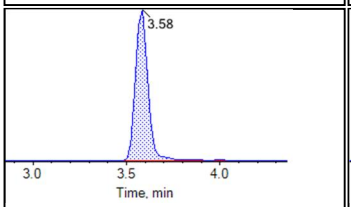
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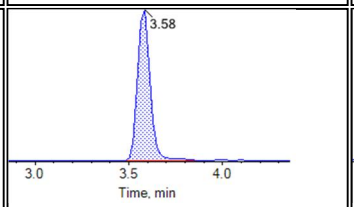
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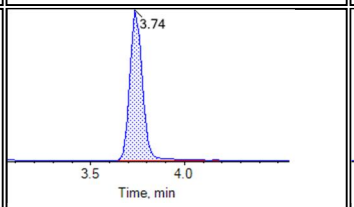
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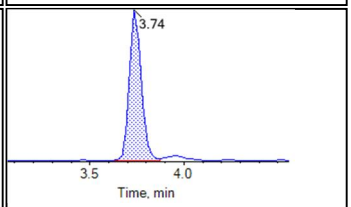
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NMeFOSAA_2

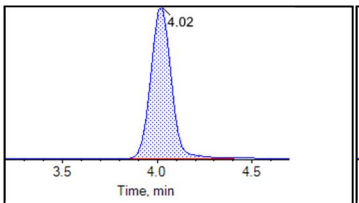


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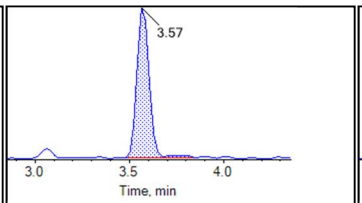


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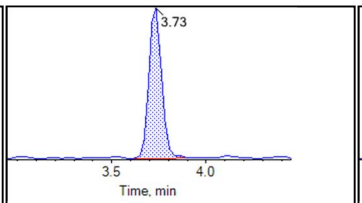
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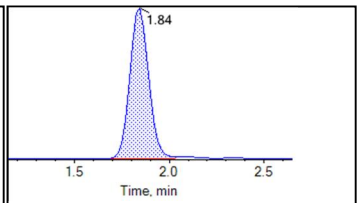
13C2-PFDoA



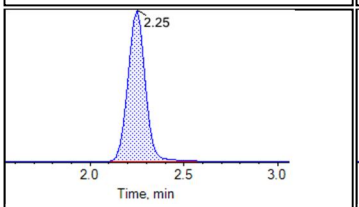
d3-MeFOSAA



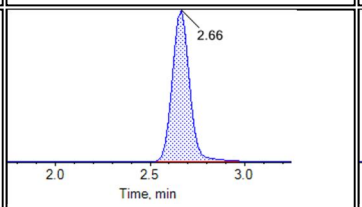
d5-EtFOSAA



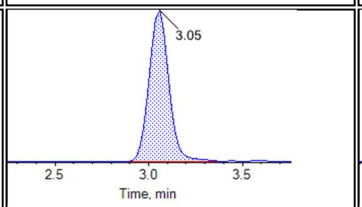
13C5-PFHxA



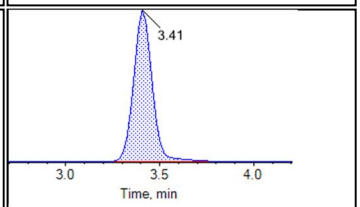
13C4-PFHpA



13C8-PFOA



13C9-PFNA

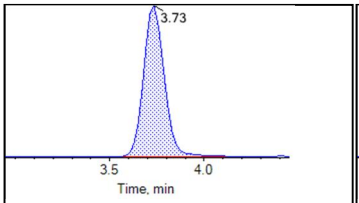


13C6-PFDA

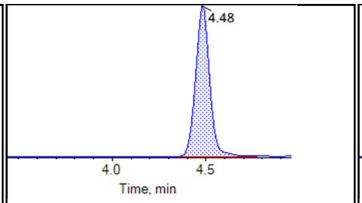
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Chromatogram Report

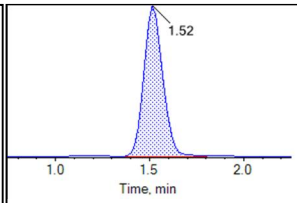
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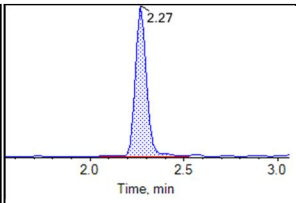
13C7-PFUnA



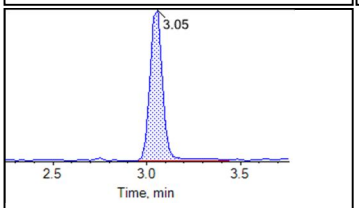
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

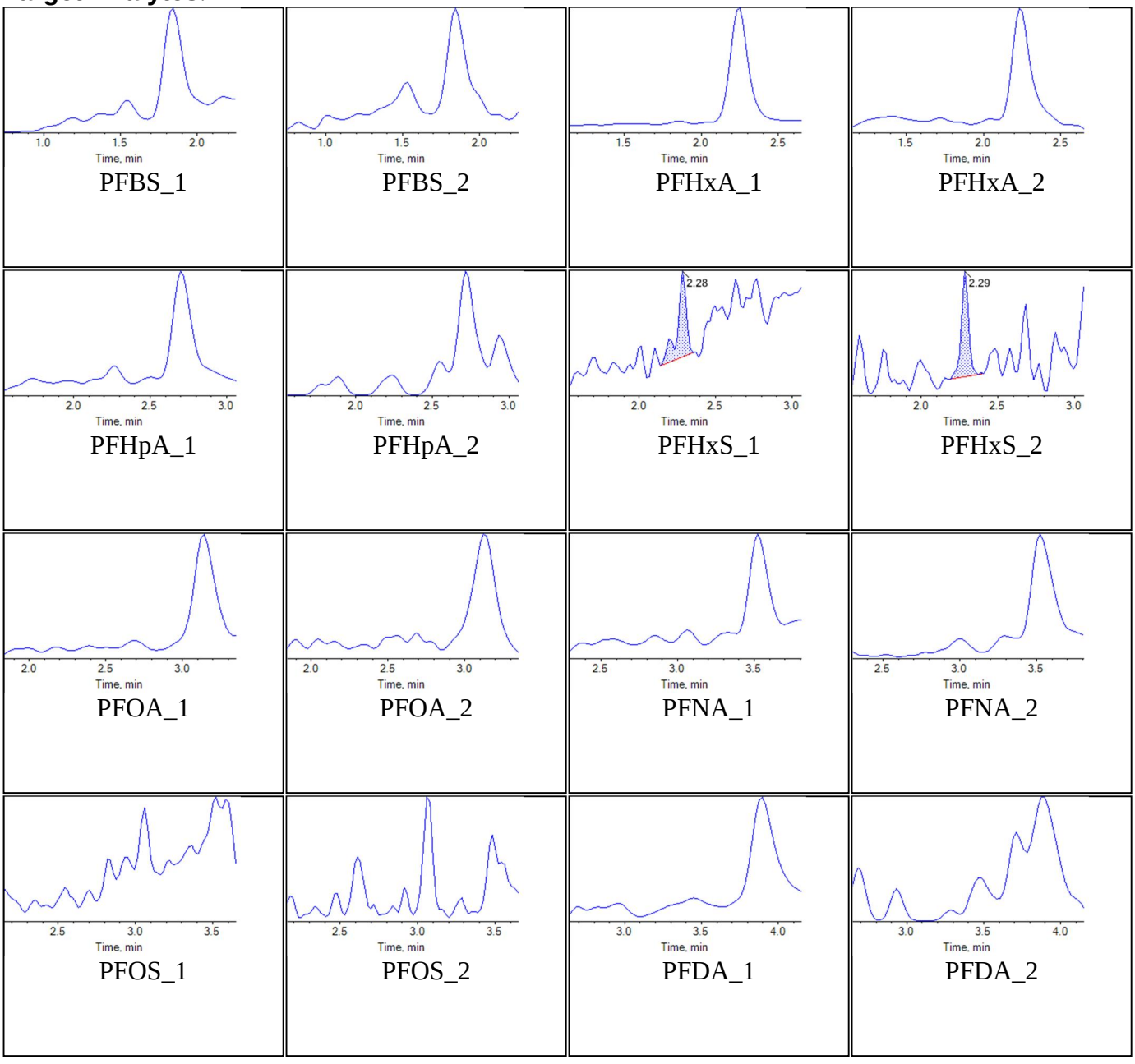
Chromatogram Report

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Sample Name	CR892PB-FS(3)	**Injection Vial**	27
Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:49:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

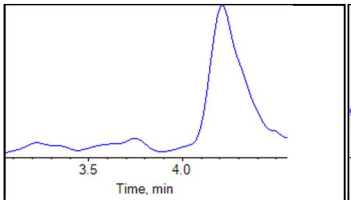
Target Analytes:



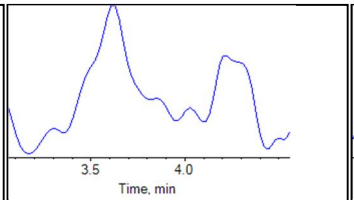
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Chromatogram Report

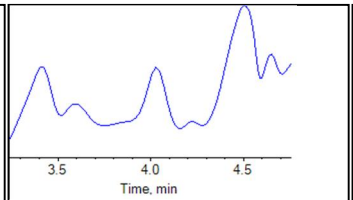
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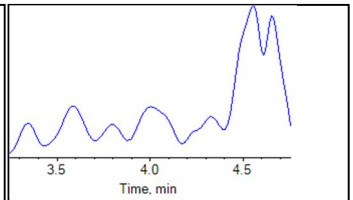
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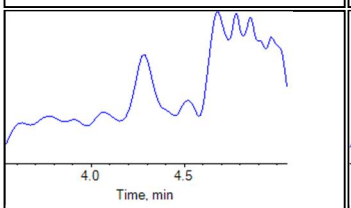
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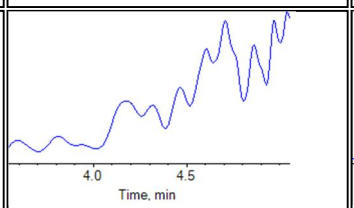
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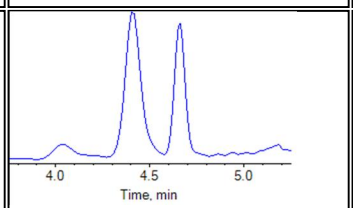
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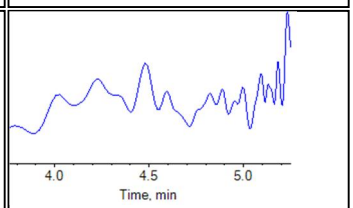
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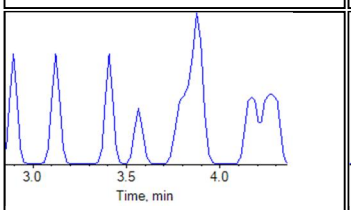
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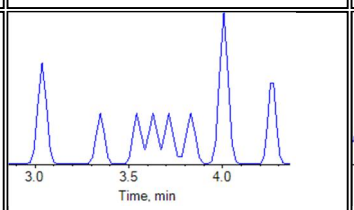
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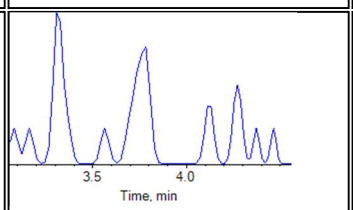
PFTeDA_2



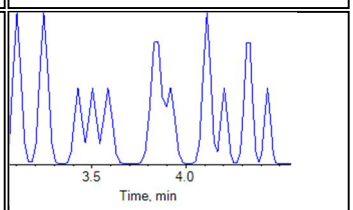
NMeFOSAA_1



NMeFOSAA_2

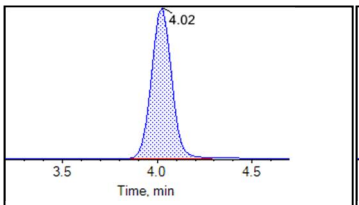


NEtFOSAA_1

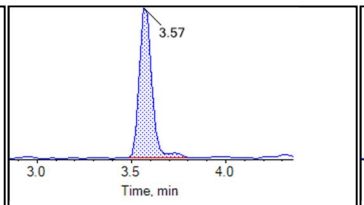


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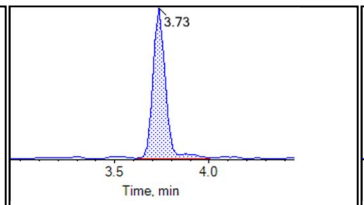
Internal Standards:



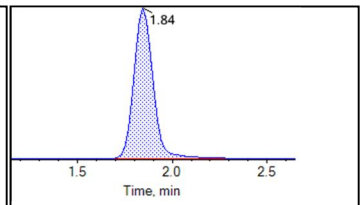
13C2-PFDoA



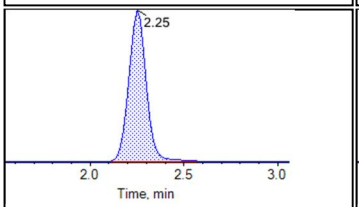
d3-MeFOSAA



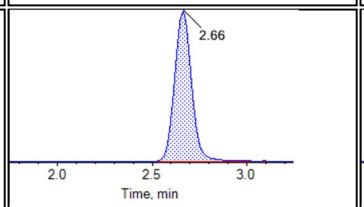
d5-EtFOSAA



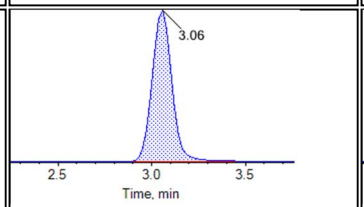
13C5-PFHxA



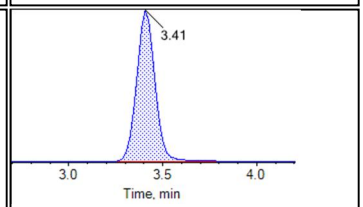
13C4-PFHpA



13C8-PFOA



13C9-PFNA

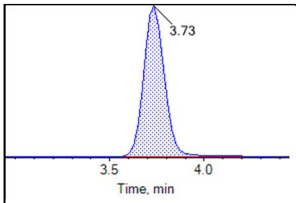


13C6-PFDA

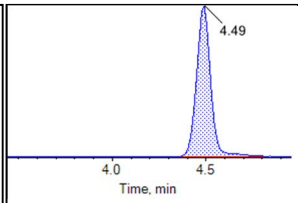
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Chromatogram Report

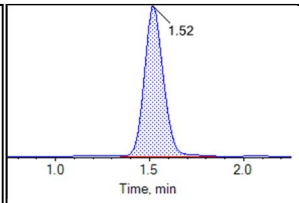
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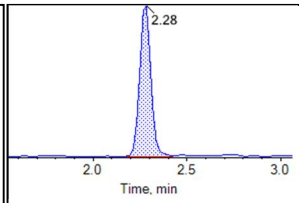
13C7-PFUnA



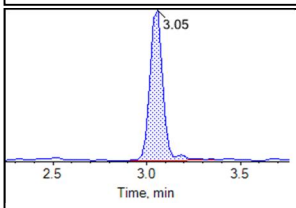
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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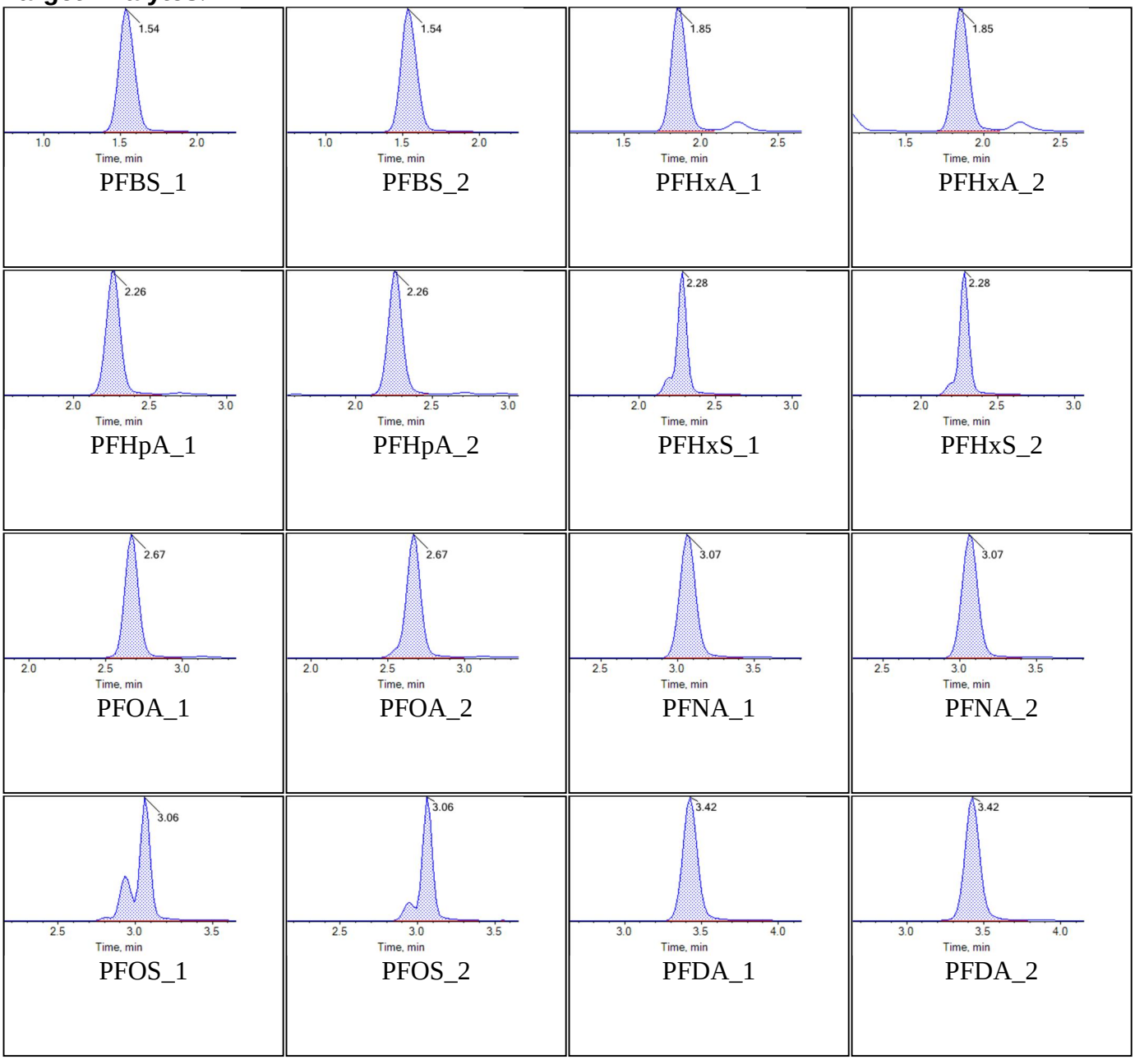
Chromatogram Report

Created with Analyst Reporter
Printed: 09/10/2018 2:25:33 PM

Sample Name	CR893LCS-FS(3)	**Injection Vial**	28
Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:00:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

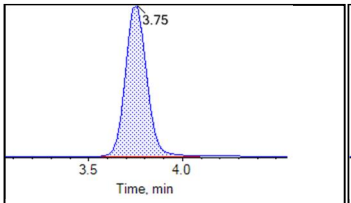
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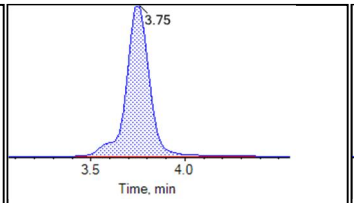
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Chromatogram Report

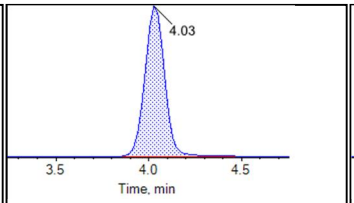
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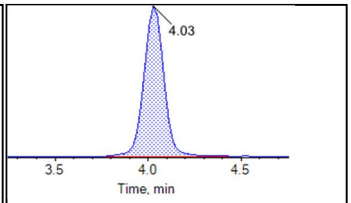
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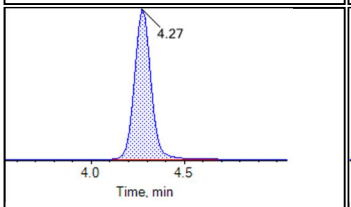
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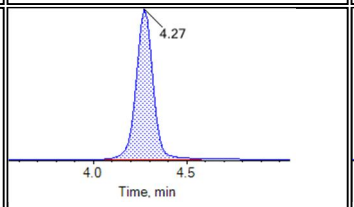
PFDoA_1



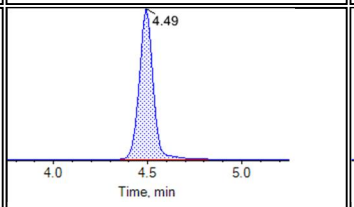
PFDoA_2



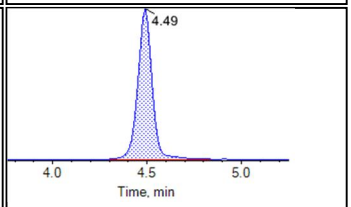
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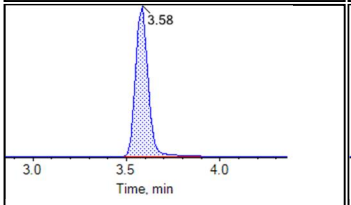
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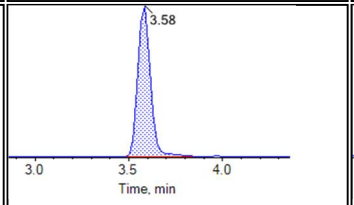
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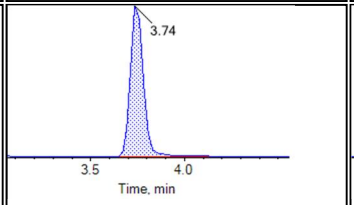
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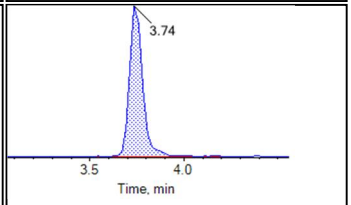
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NMeFOSAA_2

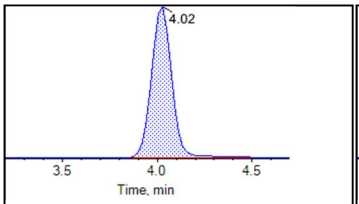


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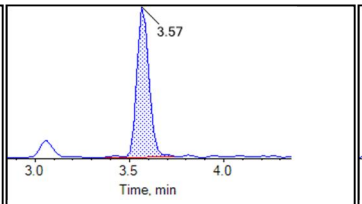


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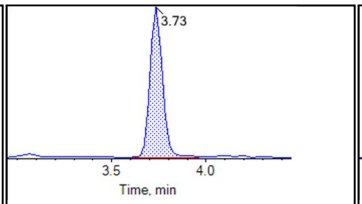
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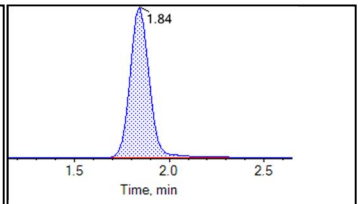
13C2-PFDoA



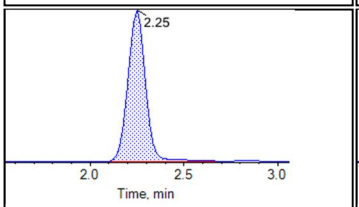
d3-MeFOSAA



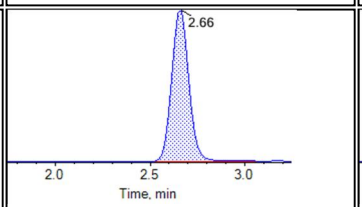
d5-EtFOSAA



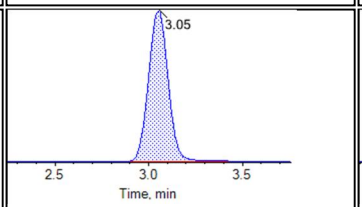
13C5-PFHxA



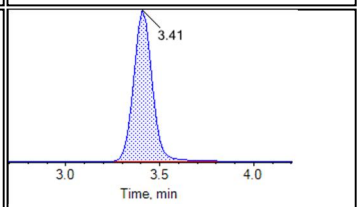
13C4-PFHpA



13C8-PFOA



13C9-PFNA

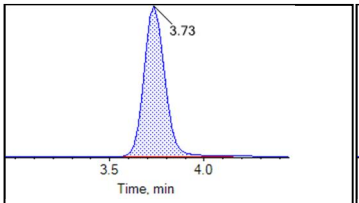


13C6-PFDA

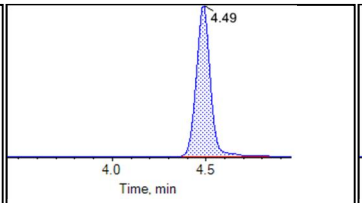
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Chromatogram Report

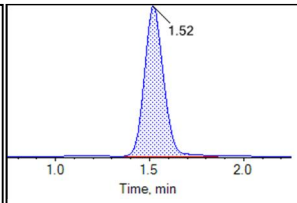
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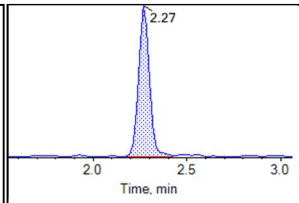
13C7-PFUnA



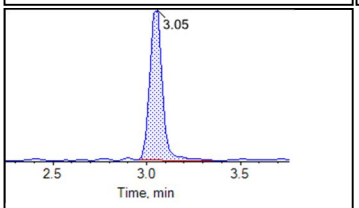
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

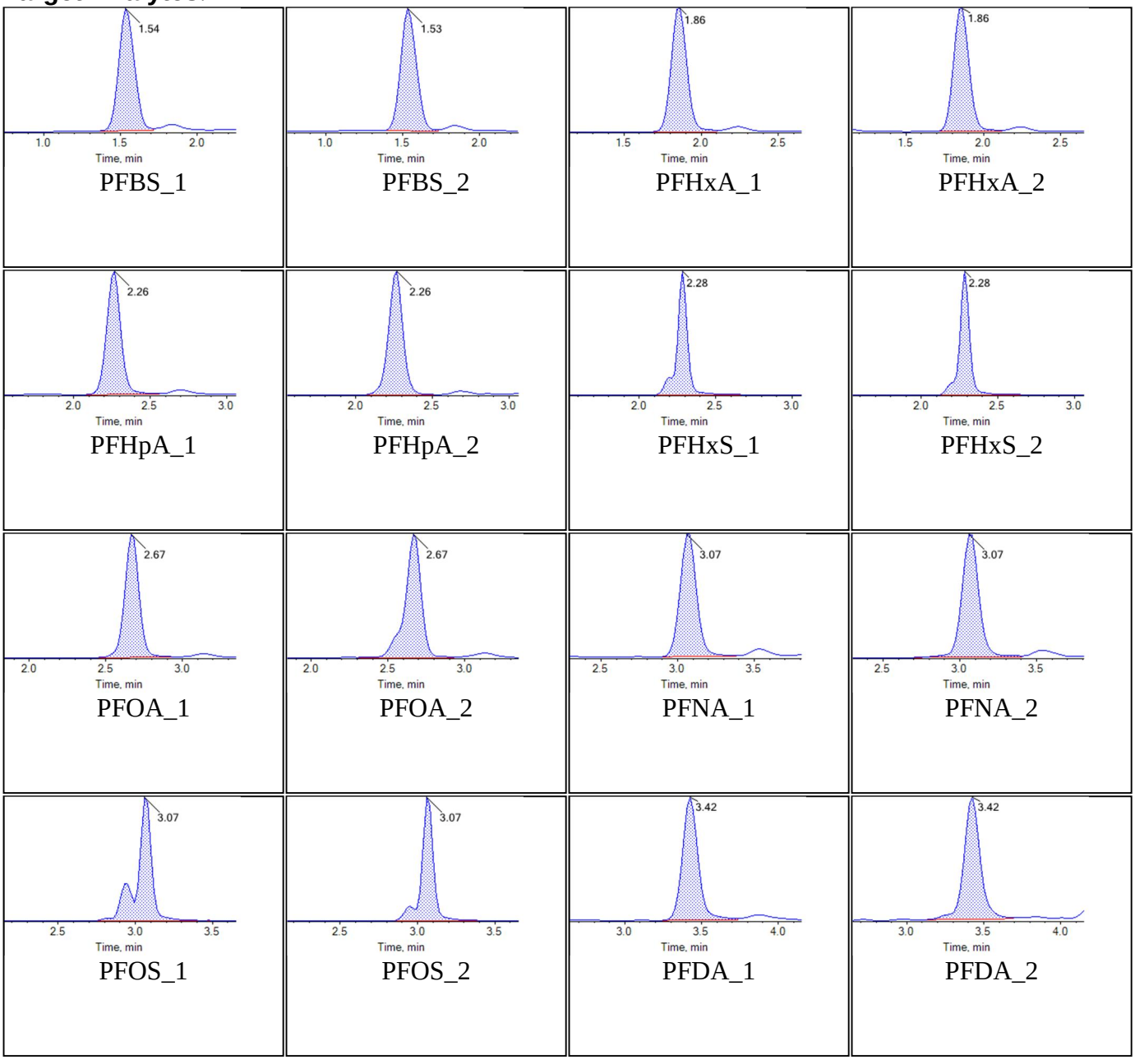
Chromatogram Report

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Sample Name	J8352-FS(3)	**Injection Vial**	29
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:11:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

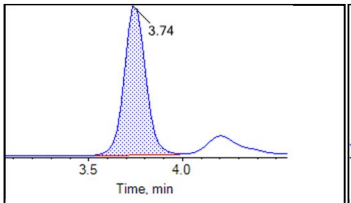
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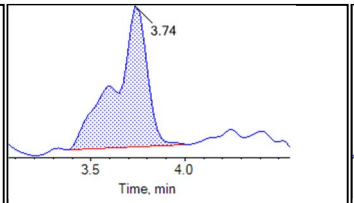
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Chromatogram Report

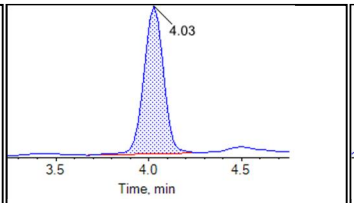
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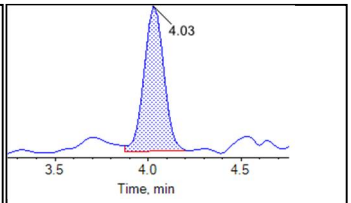
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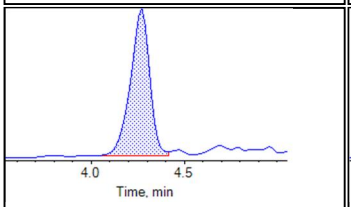
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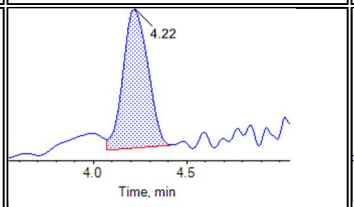
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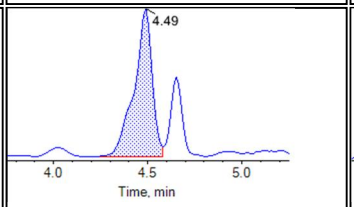
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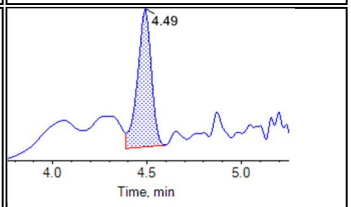
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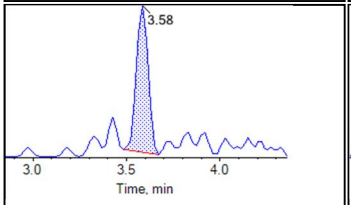
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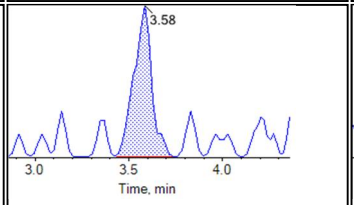
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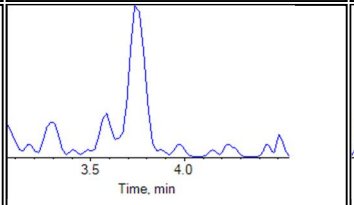
PFTeDA_2



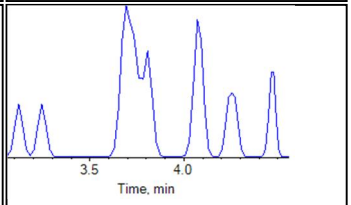
NMeFOSAA_1



NMeFOSAA_2

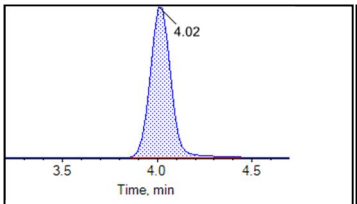


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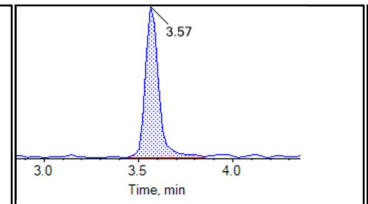


NEtFOSAA_2

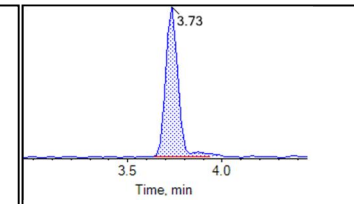
Internal Standards:



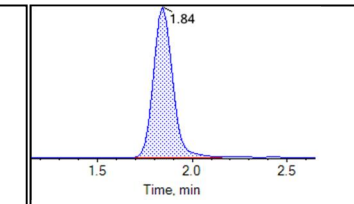
13C2-PFDoA



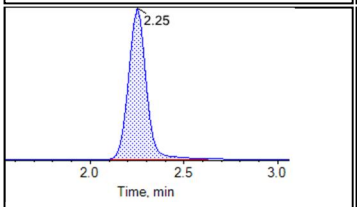
d3-MeFOSAA



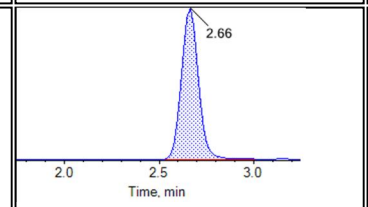
d5-EtFOSAA



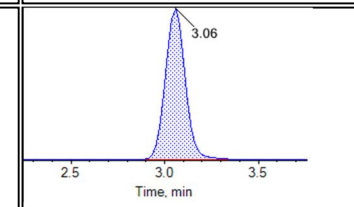
13C5-PFHxA



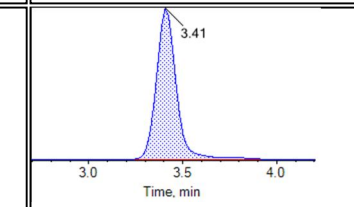
13C4-PFHpA



13C8-PFOA



13C9-PFNA

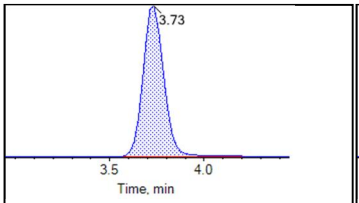


13C6-PFDA

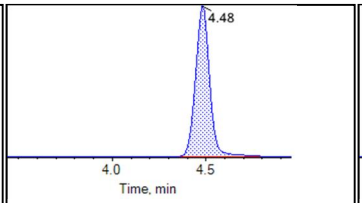
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Chromatogram Report

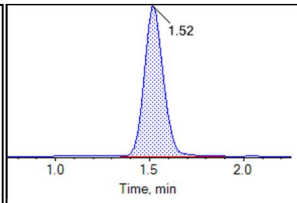
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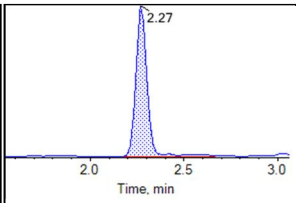
13C7-PFUnA



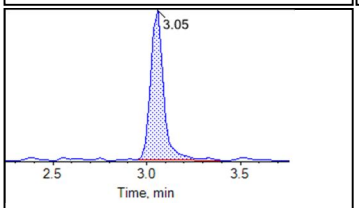
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

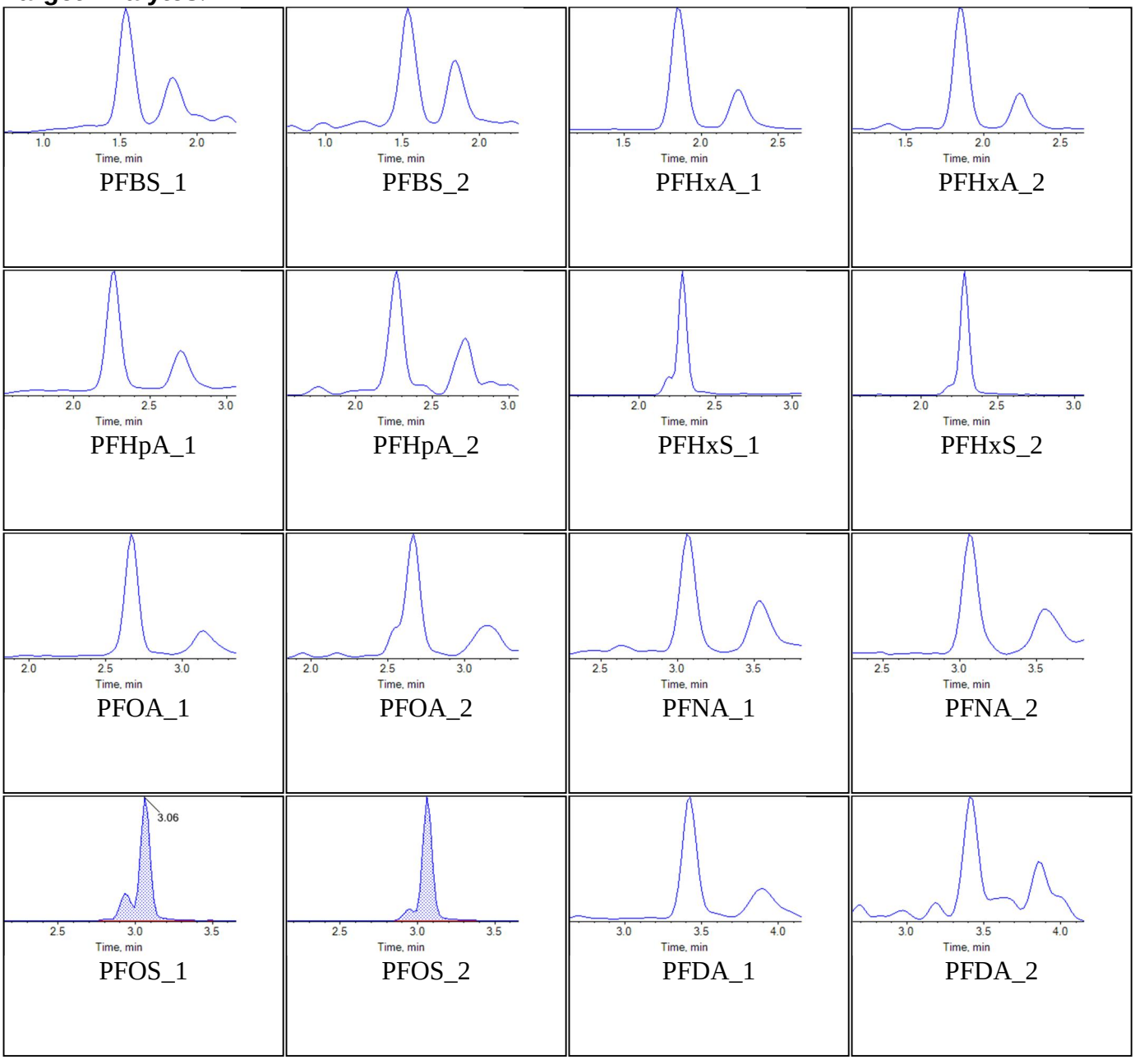
Chromatogram Report

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Printed: 09/10/2018 2:25:42 PM

Sample Name	J8352-FS-D(5)	**Injection Vial**	30
Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:22:03	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

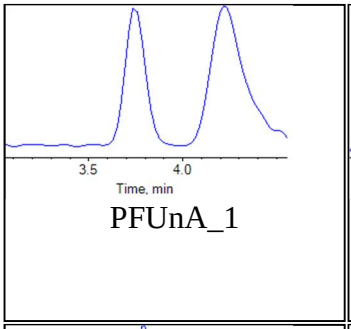
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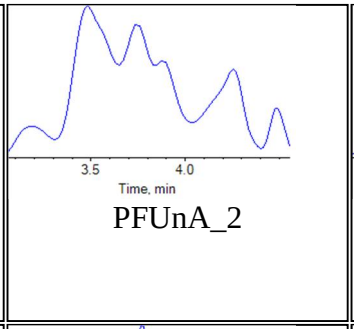
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Chromatogram Report

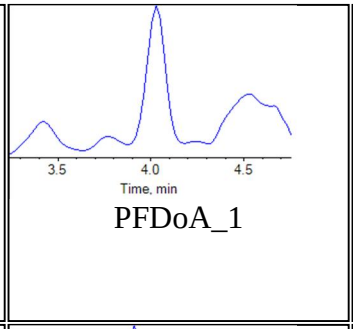
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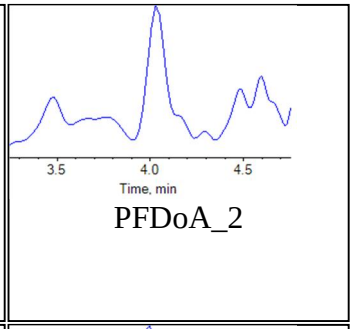
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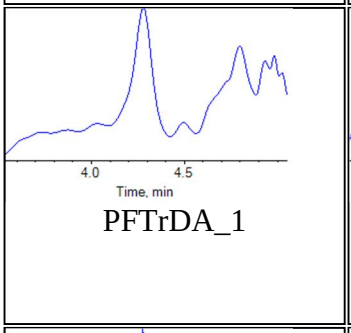
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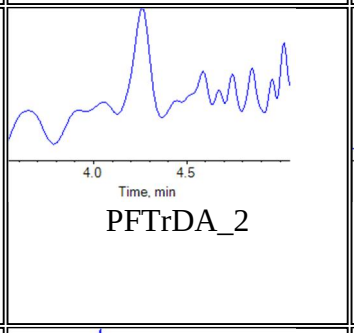
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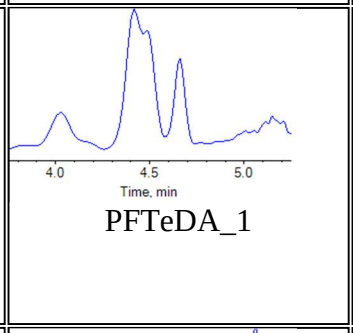
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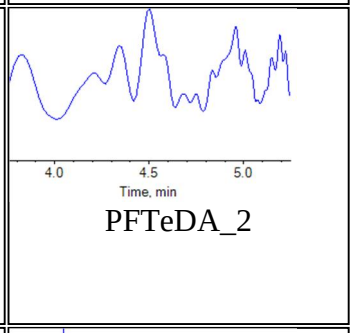
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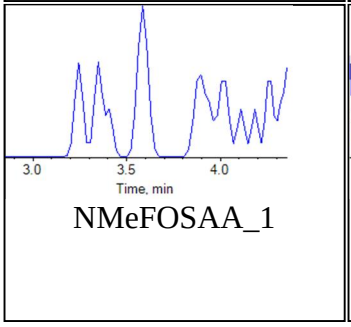
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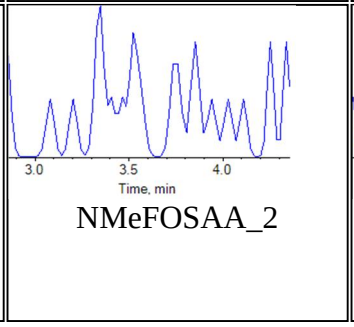
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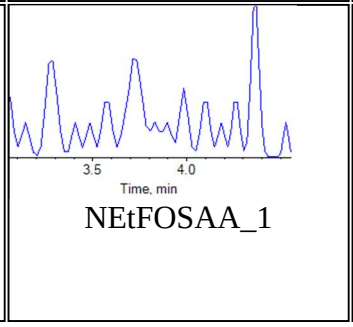
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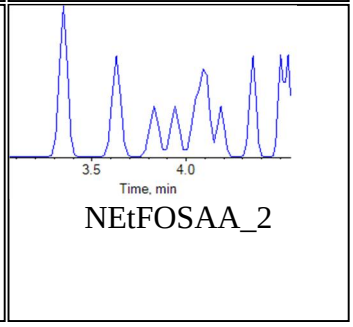
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NMeFOSAA_2

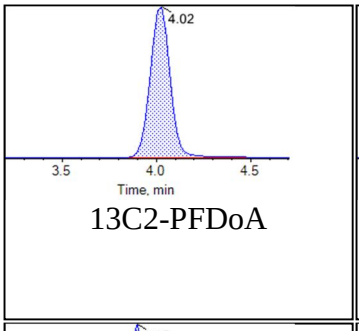


NEtFOSAA_1

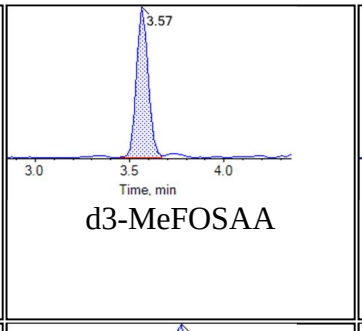


NEtFOSAA_2

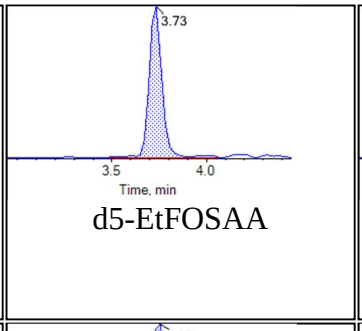
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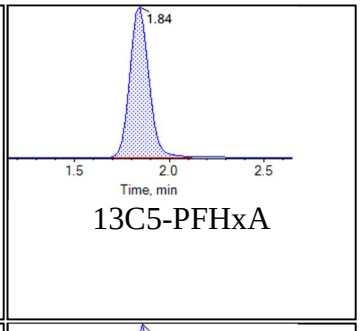
13C2-PFDoA



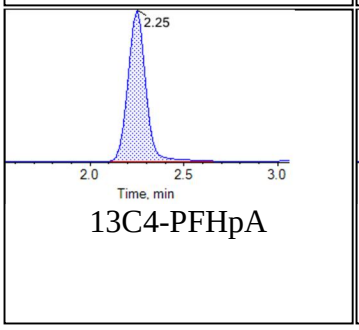
d3-MeFOSAA



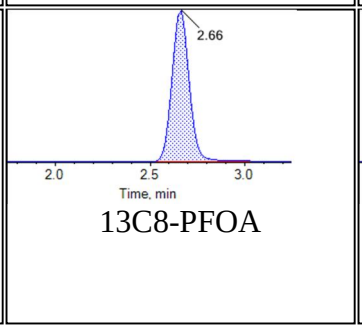
d5-EtFOSAA



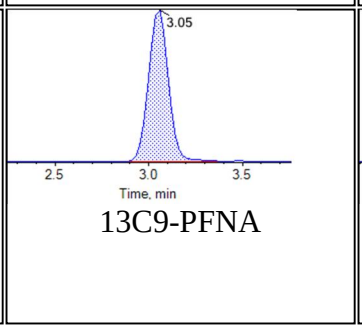
13C5-PFHxA



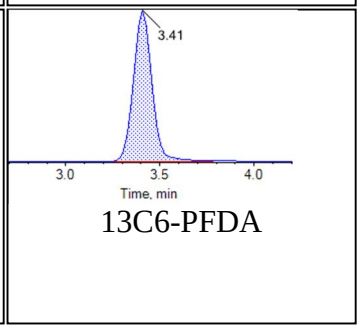
13C4-PFHpA



13C8-PFOA



13C9-PFNA

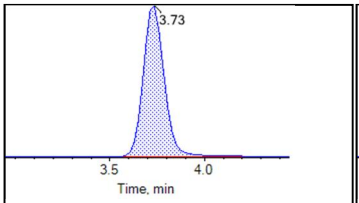


13C6-PFDA

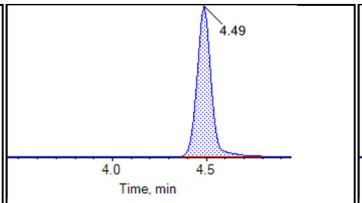
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Chromatogram Report

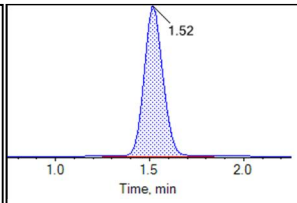
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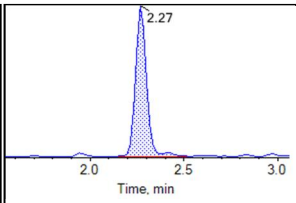
13C7-PFUnA



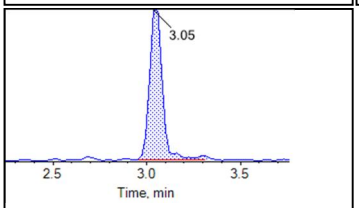
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

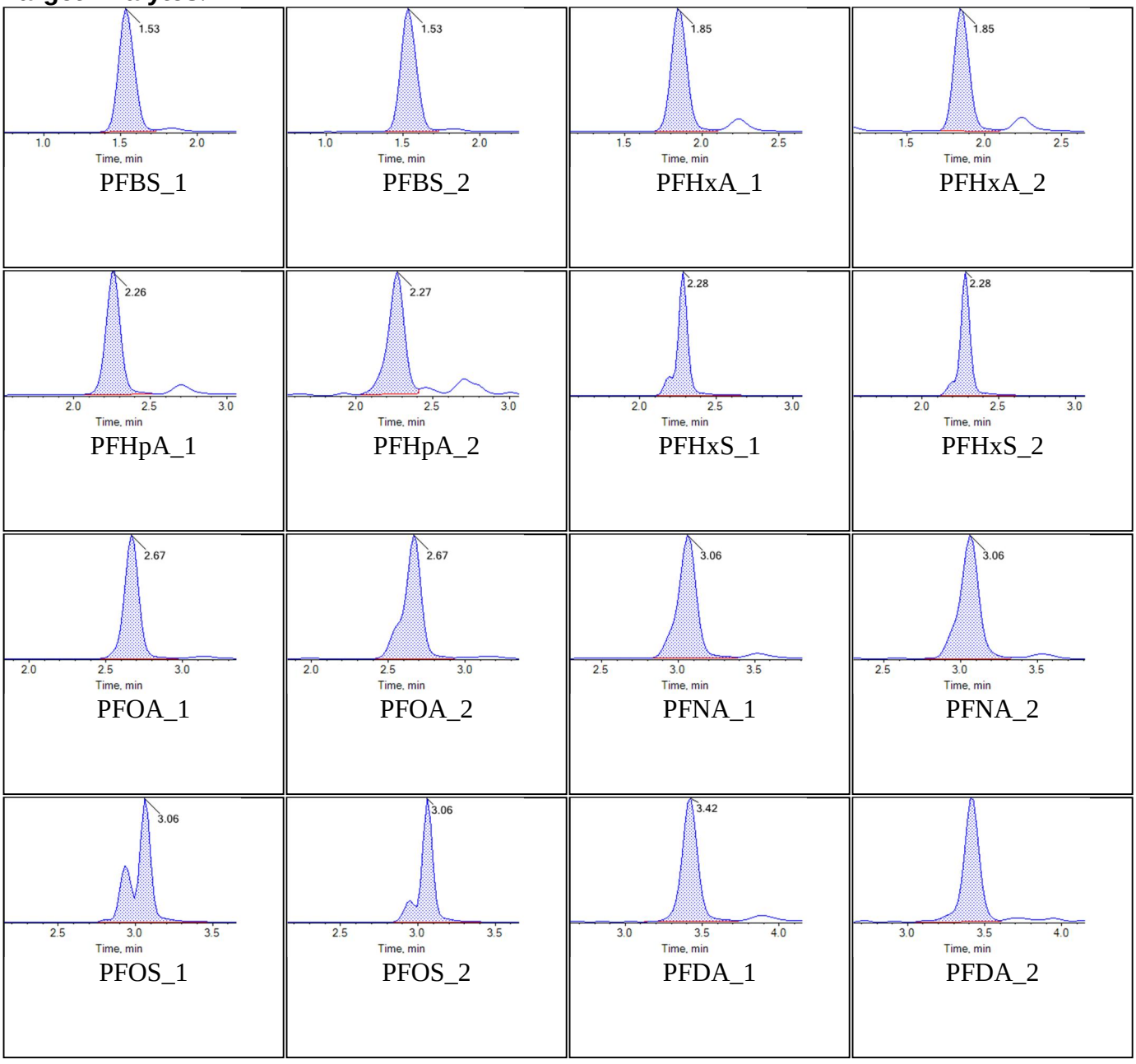
Chromatogram Report

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Sample Name	J8353-FS(3)	**Injection Vial**	31
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:32:55	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

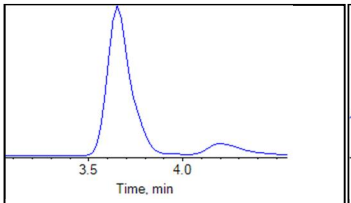
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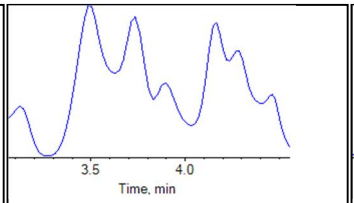
BATTELLE

Chromatogram Report

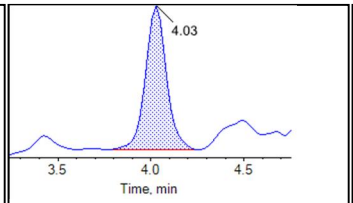
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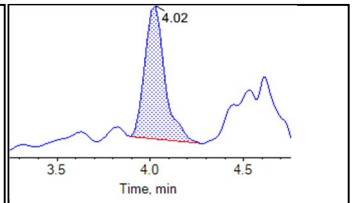
PFUnA_1



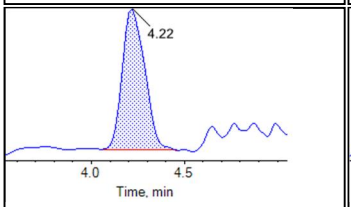
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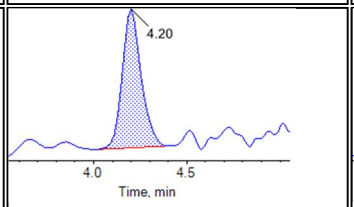
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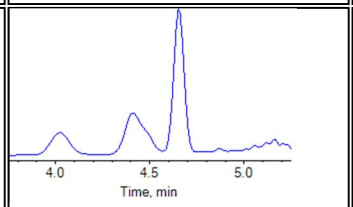
PFDoA_2



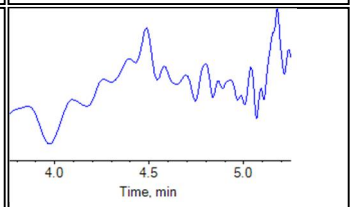
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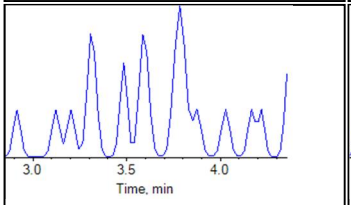
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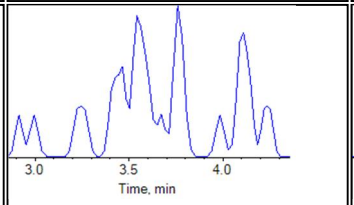
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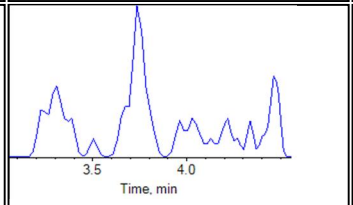
PFTeDA_2



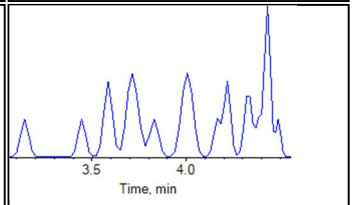
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NMeFOSAA_2

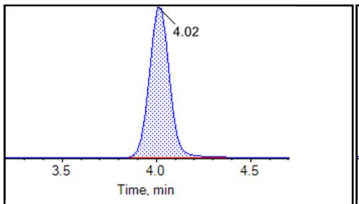


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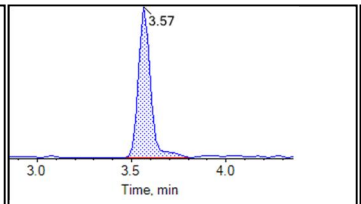


NEtFOSAA_2

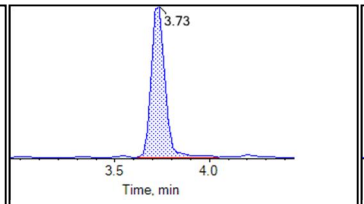
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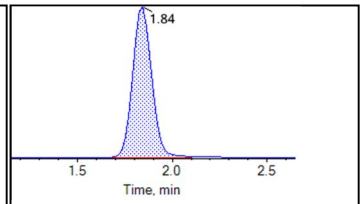
13C2-PFDoA



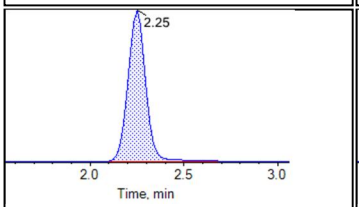
d3-MeFOSAA



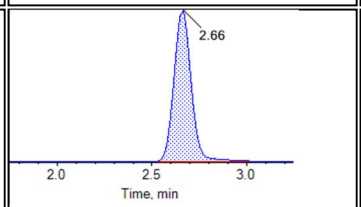
d5-EtFOSAA



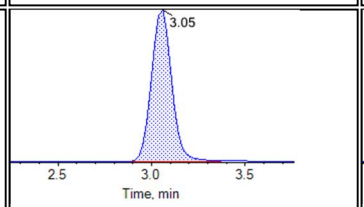
13C5-PFHxA



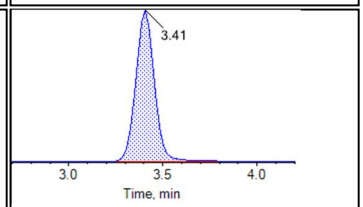
13C4-PFHpA



13C8-PFOA



13C9-PFNA

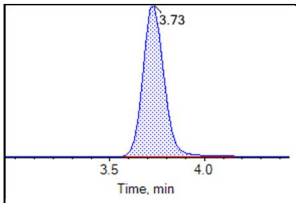


13C6-PFDA

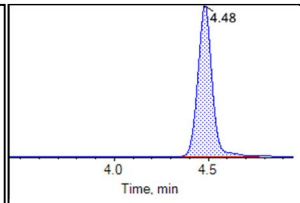
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Chromatogram Report

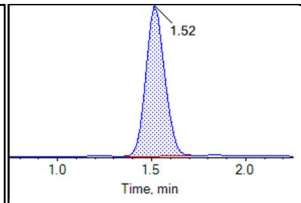
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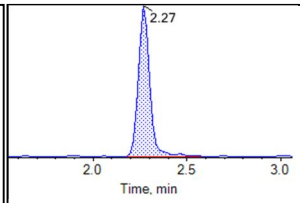
13C7-PFUnA



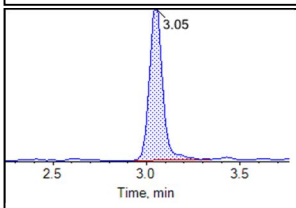
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

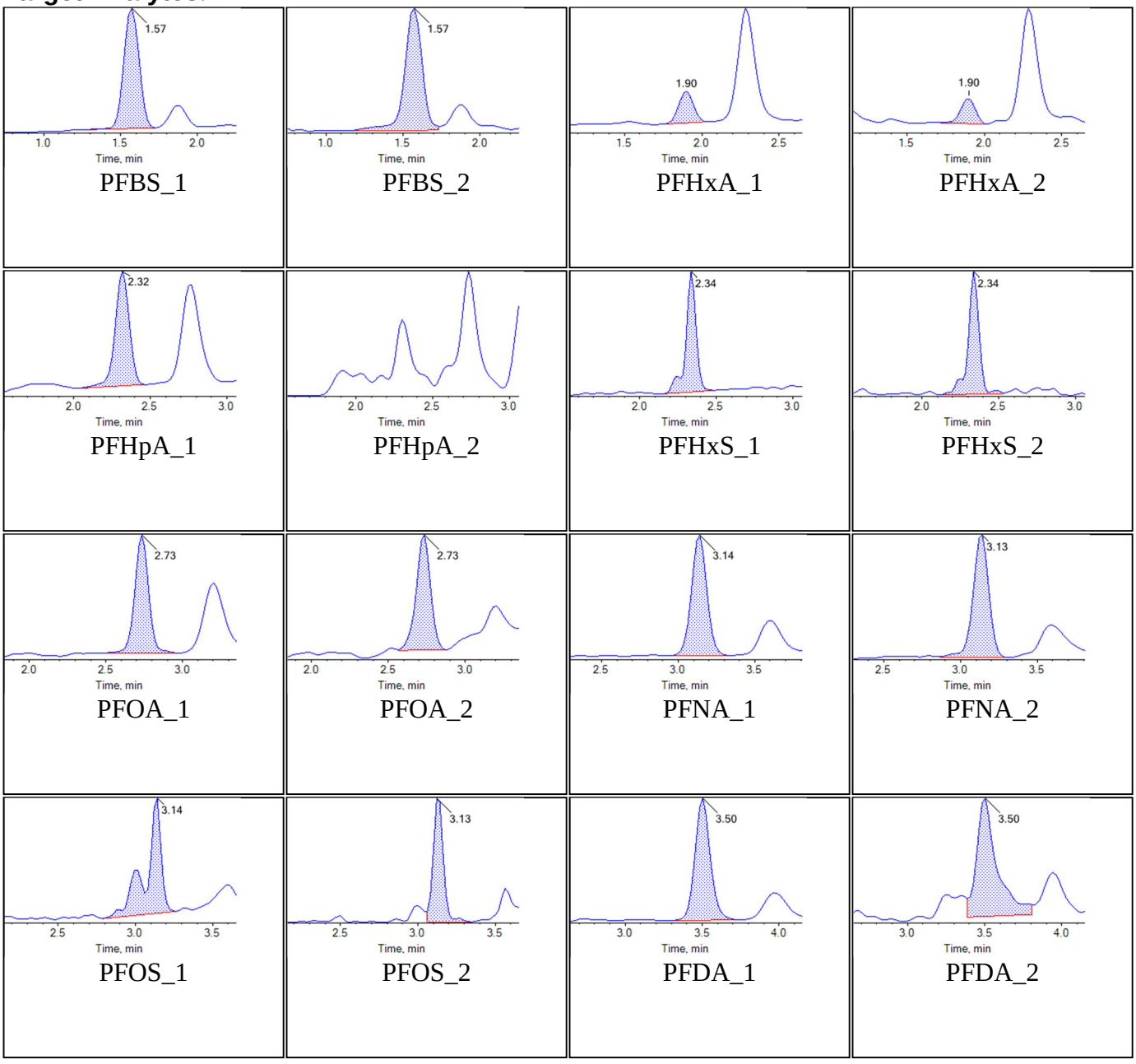
Chromatogram Report

Created with Analyst Reporter
Printed: 09/10/2018 2:24:16 PM

Sample Name	KB73	**Injection Vial**	2
Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T15:40:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

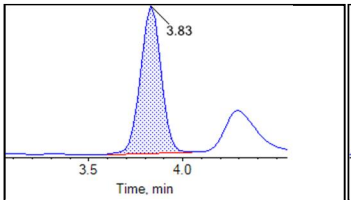
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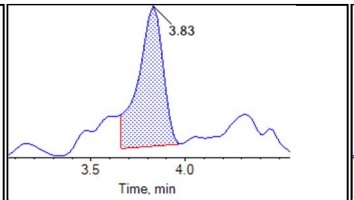
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Chromatogram Report

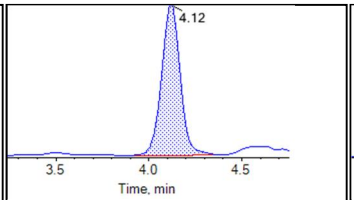
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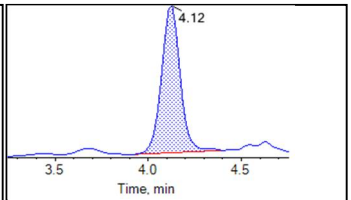
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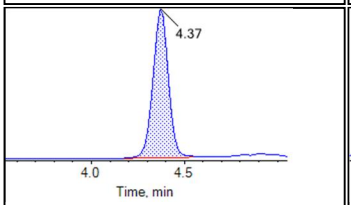
PFUnA_2



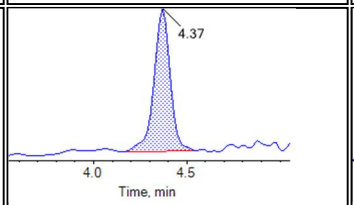
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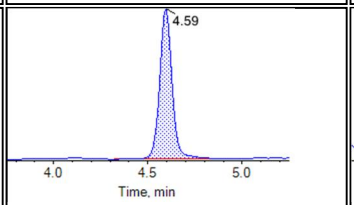
PFDoA_2



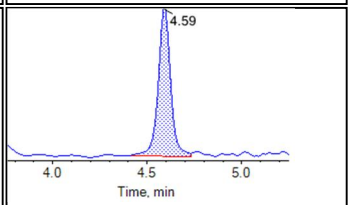
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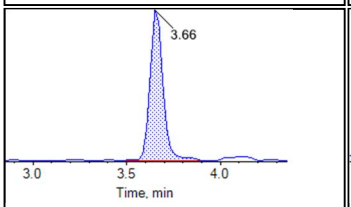
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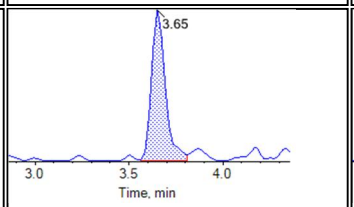
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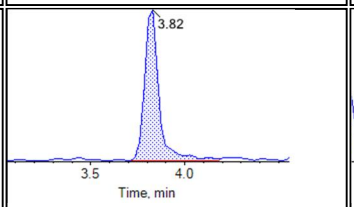
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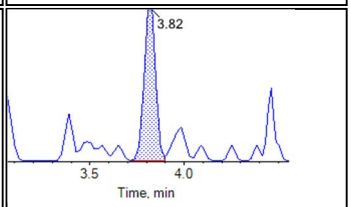
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NMeFOSAA_2

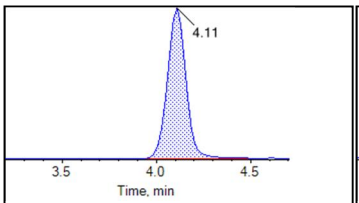


NEtFOSAA_1

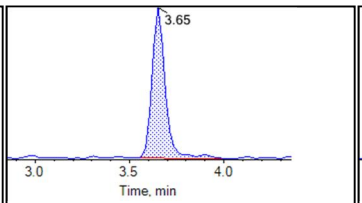


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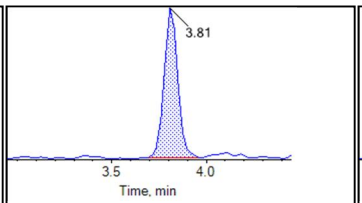
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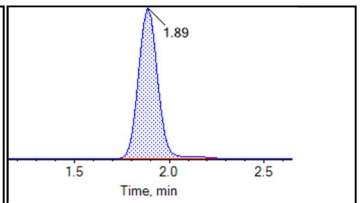
13C2-PFDoA



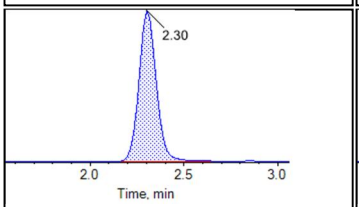
d3-MeFOSAA



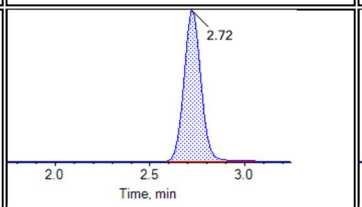
d5-EtFOSAA



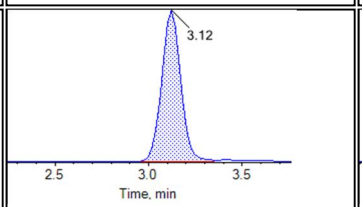
13C5-PFHxA



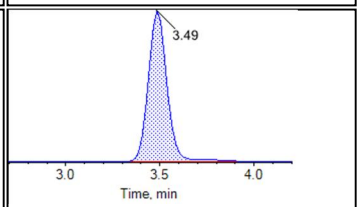
13C4-PFHpA



13C8-PFOA



13C9-PFNA

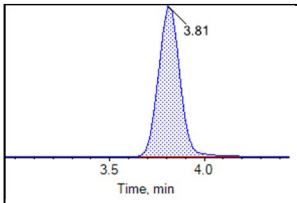


13C6-PFDA

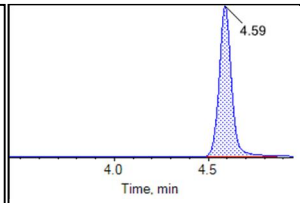
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Chromatogram Report

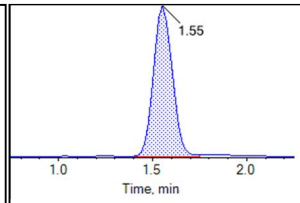
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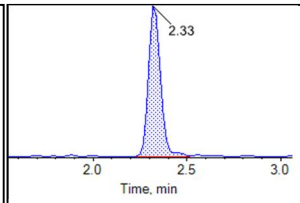
13C7-PFUnA



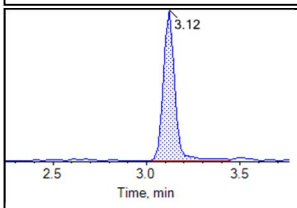
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

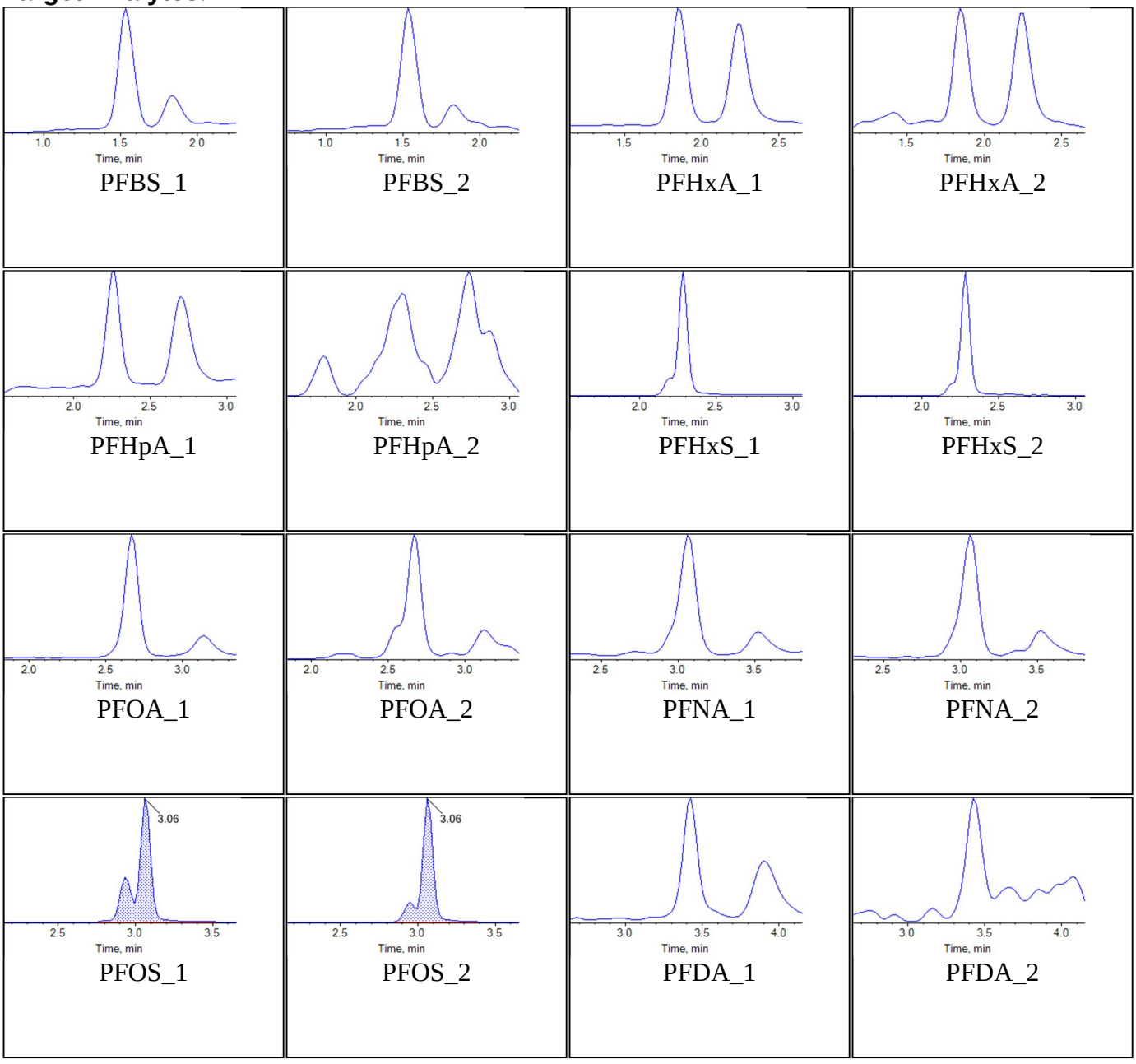
Chromatogram Report

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Sample Name	J8353-FS-D(5)	**Injection Vial**	32
Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:43:46	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

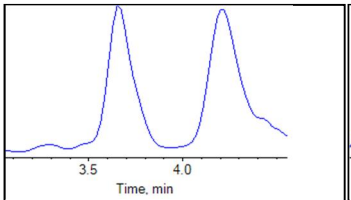
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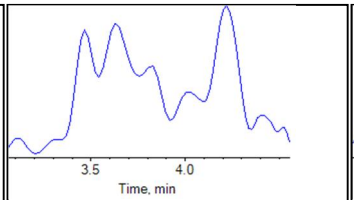
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Chromatogram Report

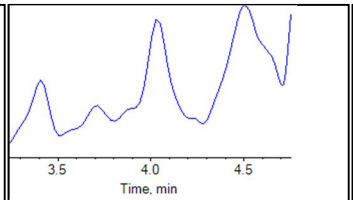
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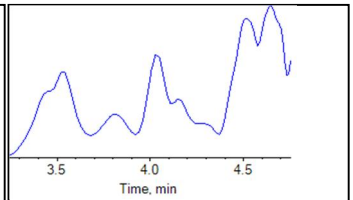
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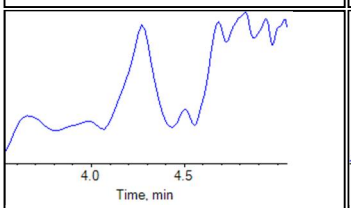
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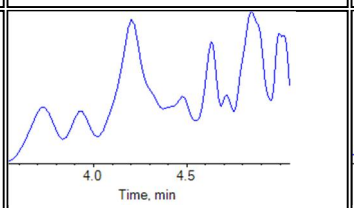
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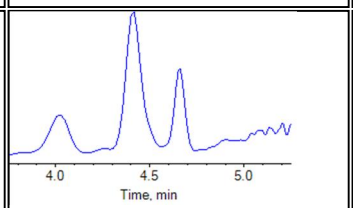
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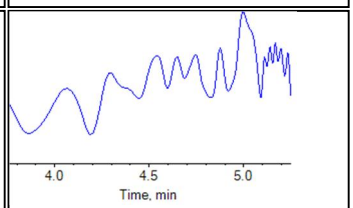
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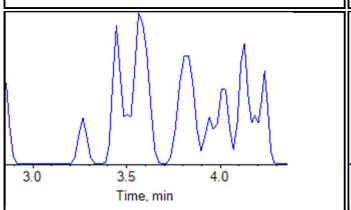
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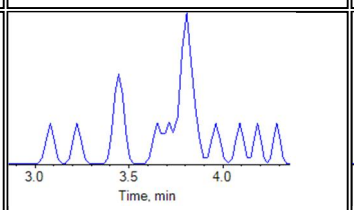
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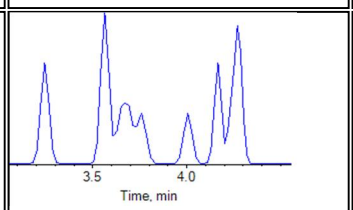
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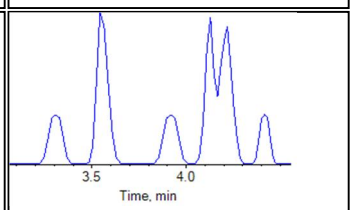
NMeFOSAA_1



NMeFOSAA_2

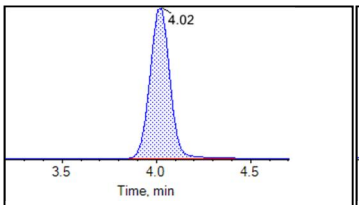


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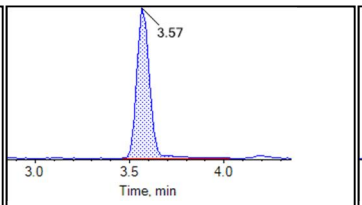


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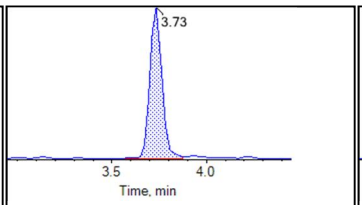
Internal Standards:



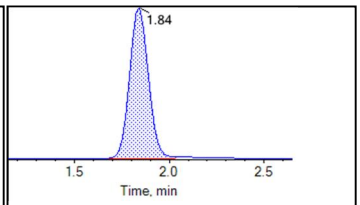
13C2-PFDoA



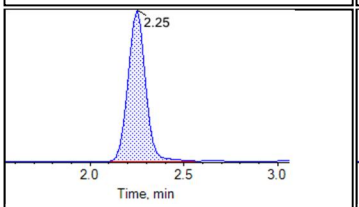
d3-MeFOSAA



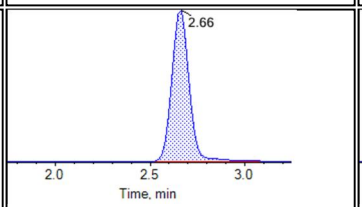
d5-EtFOSAA



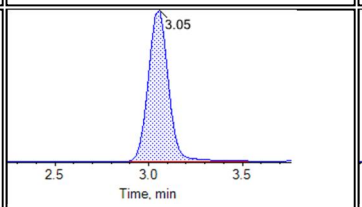
13C5-PFHxA



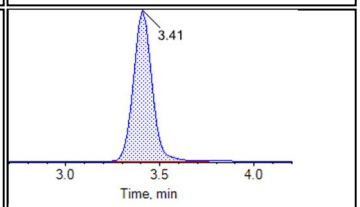
13C4-PFHpA



13C8-PFOA



13C9-PFNA

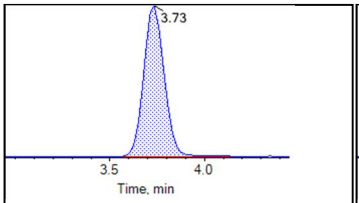


13C6-PFDA

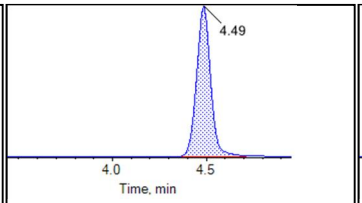
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Chromatogram Report

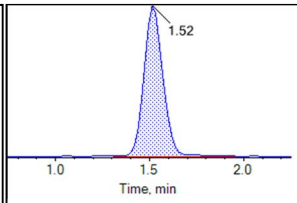
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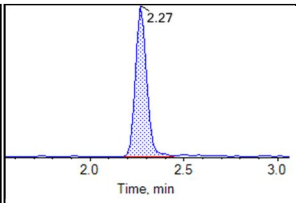
13C7-PFUnA



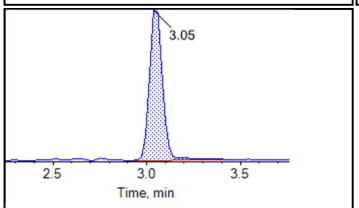
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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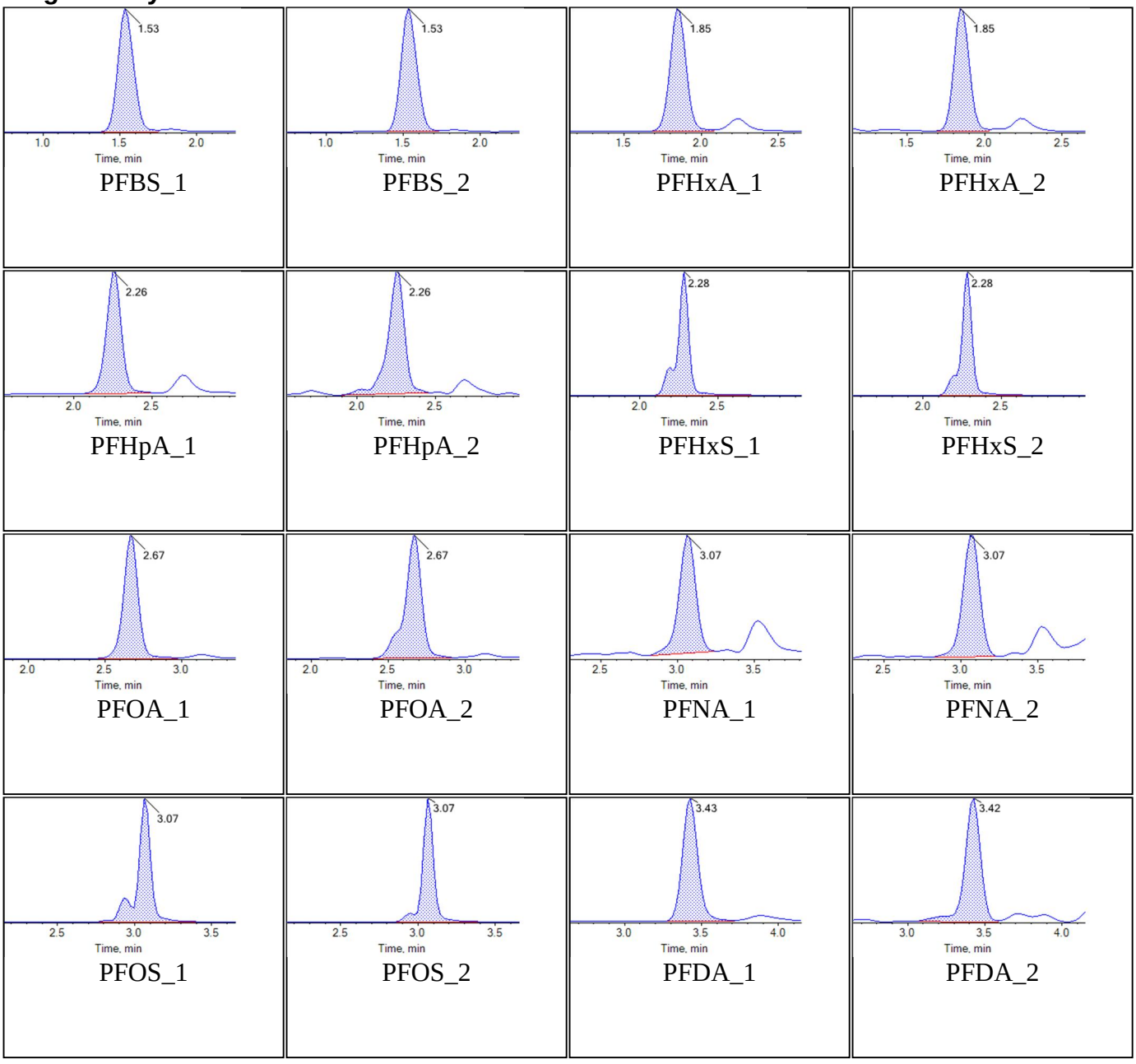
Chromatogram Report

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Sample Name	J8354-FS(3)	**Injection Vial**	33
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:54:37	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

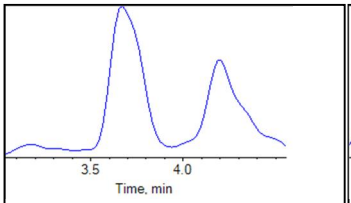
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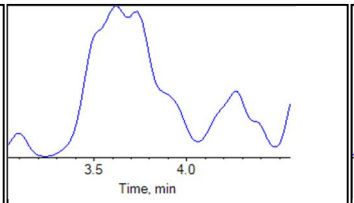
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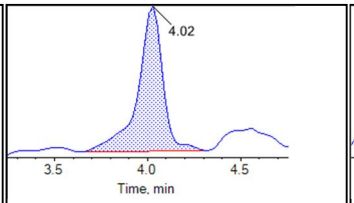
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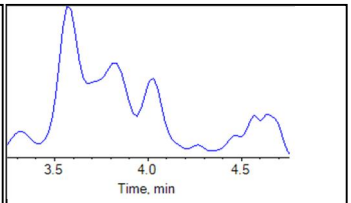
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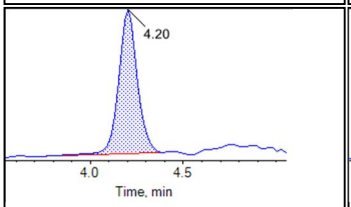
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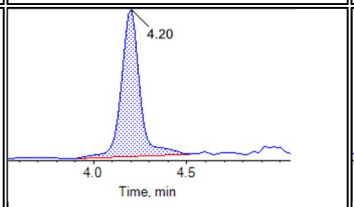
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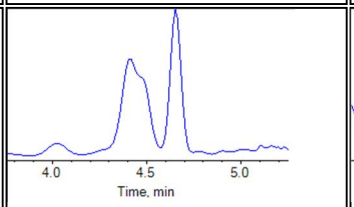
PFDoA_2



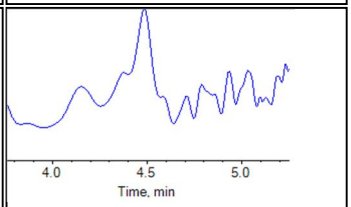
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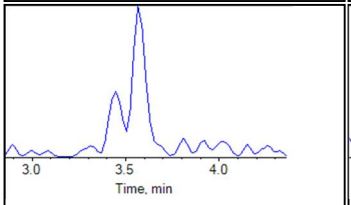
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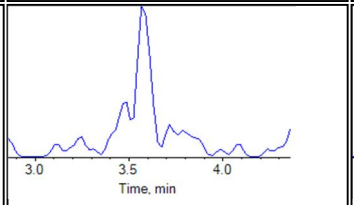
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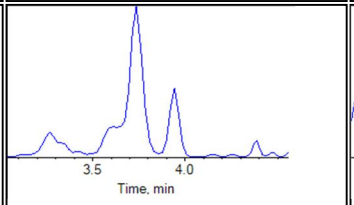
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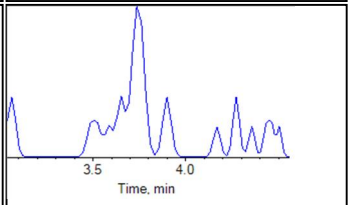
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NMeFOSAA_2

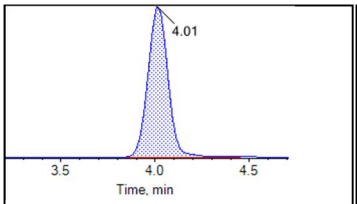


NEtFOSAA_1

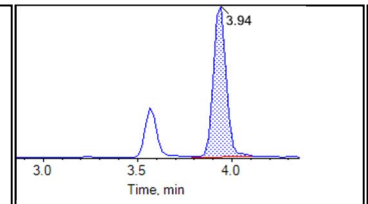


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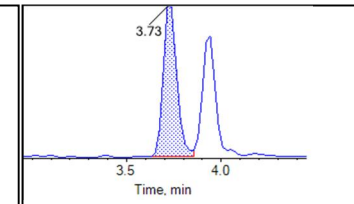
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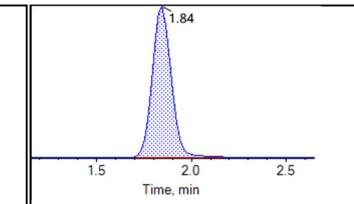
13C2-PFDoA



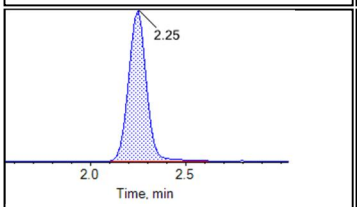
d3-MeFOSAA



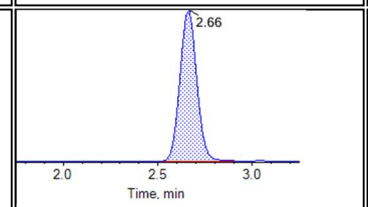
d5-EtFOSAA



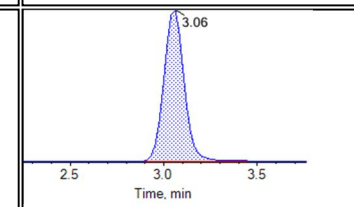
13C5-PFHxA



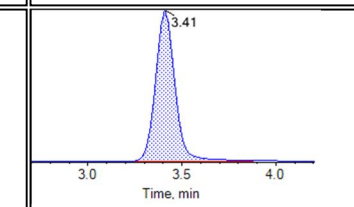
13C4-PFHpA



13C8-PFOA



13C9-PFNA

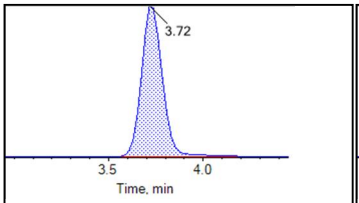


13C6-PFDA

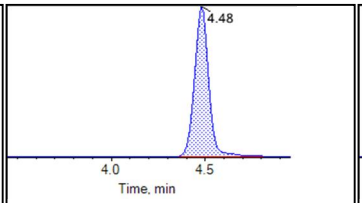
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Chromatogram Report

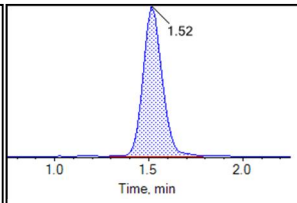
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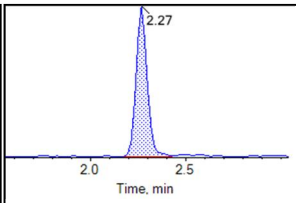
13C7-PFUnA



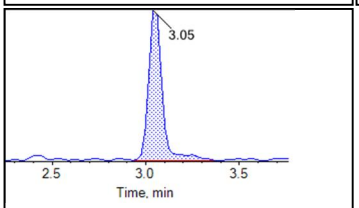
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

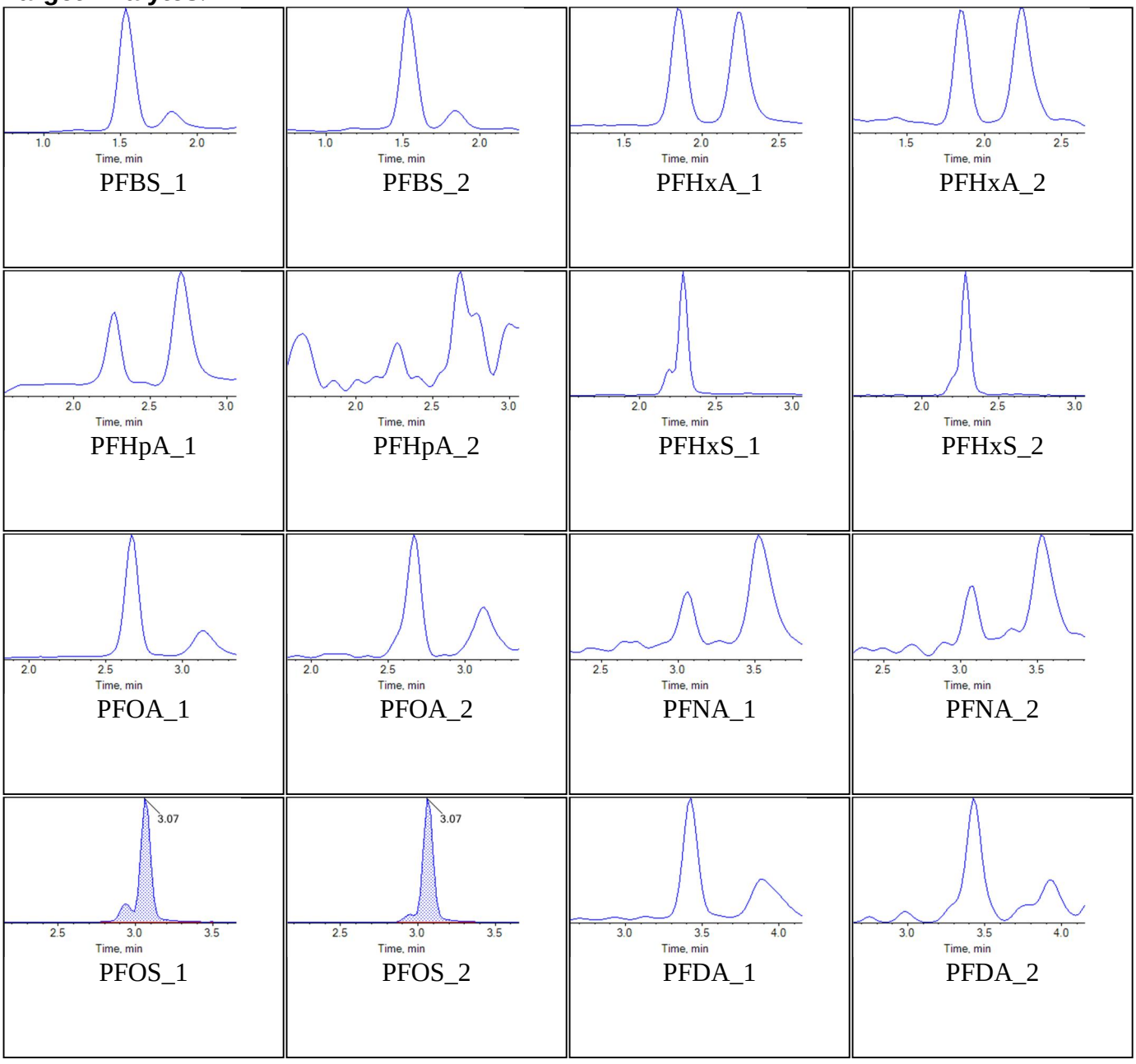
Chromatogram Report

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Sample Name	J8354-FS-D(5)	**Injection Vial**	34
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:05:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

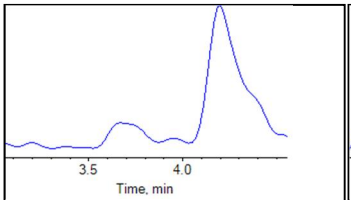
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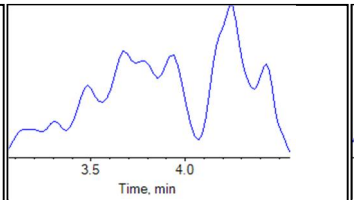
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Chromatogram Report

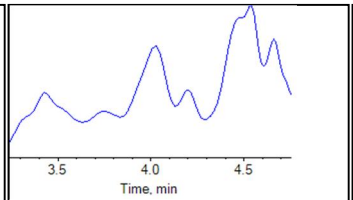
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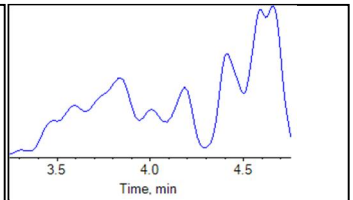
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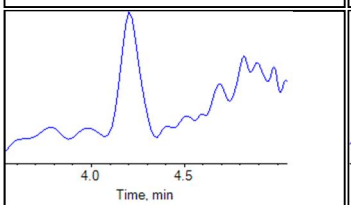
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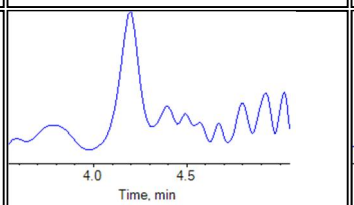
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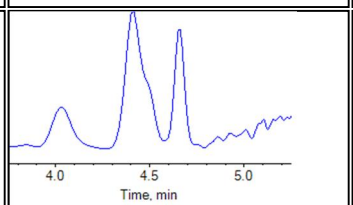
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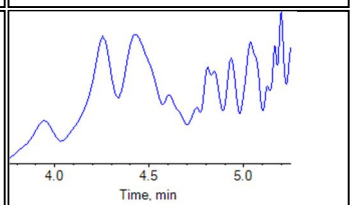
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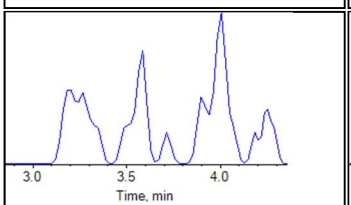
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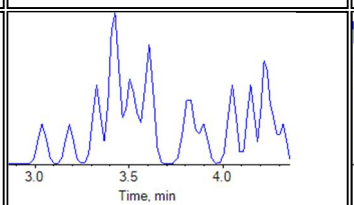
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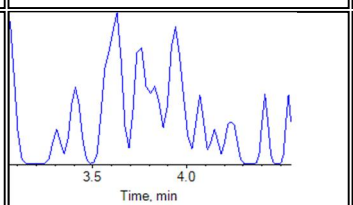
PFTeDA_2



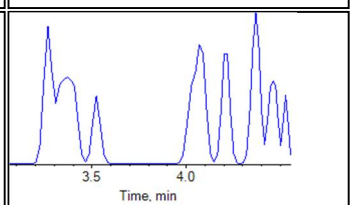
NMeFOSAA_1



NMeFOSAA_2

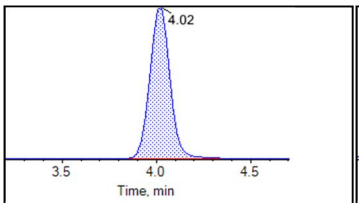


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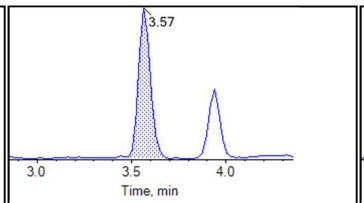


NEtFOSAA_2

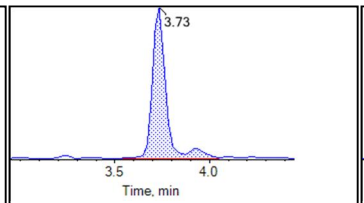
Internal Standards:



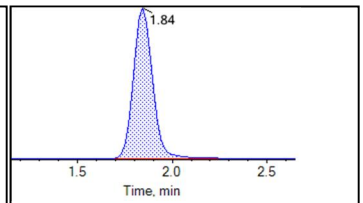
13C2-PFDoA



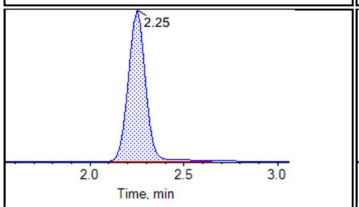
d3-MeFOSAA



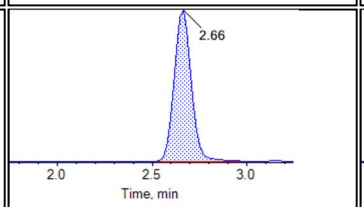
d5-EtFOSAA



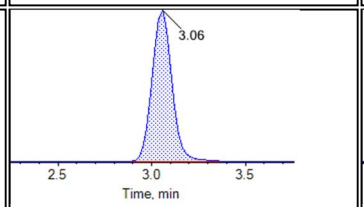
13C5-PFHxA



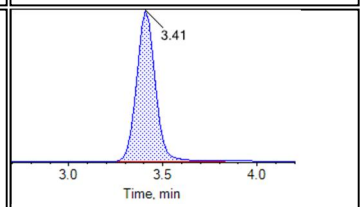
13C4-PFHpA



13C8-PFOA



13C9-PFNA

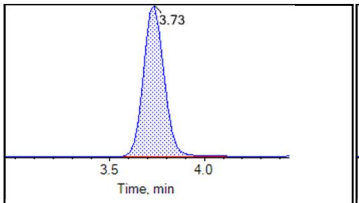


13C6-PFDA

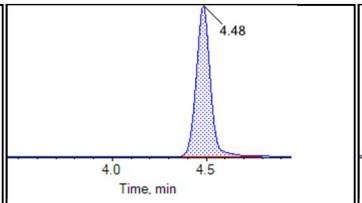
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Chromatogram Report

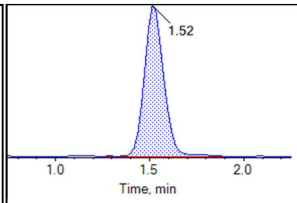
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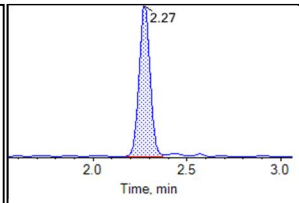
13C7-PFUnA



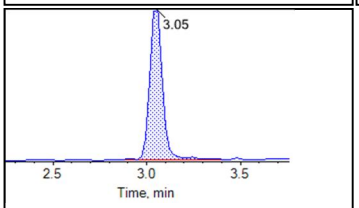
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

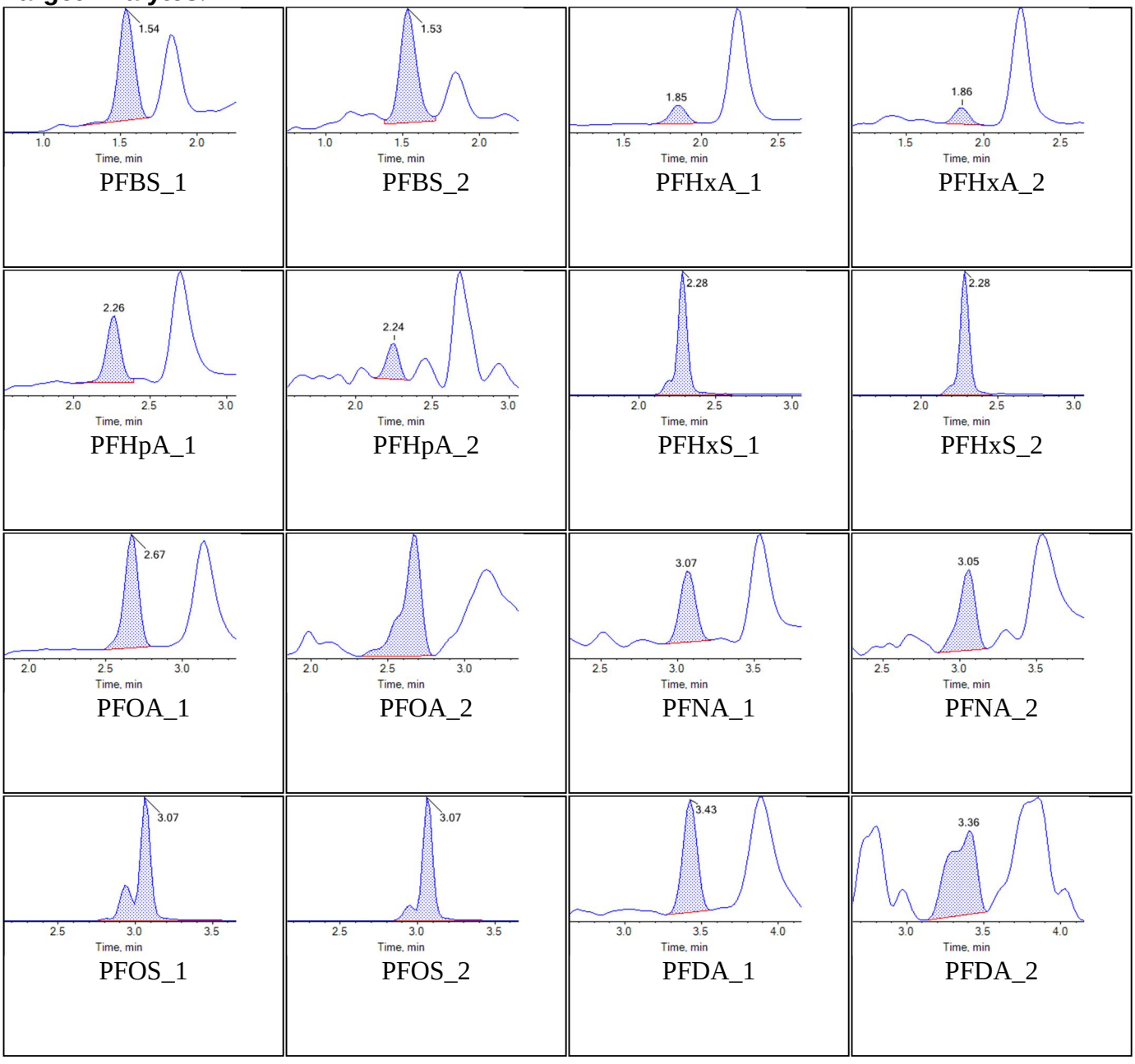
Chromatogram Report

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Printed: 09/10/2018 2:26:09 PM

Sample Name	J8355-FS(3)	**Injection Vial**	35
Sample ID	VC-PM323-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:16:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

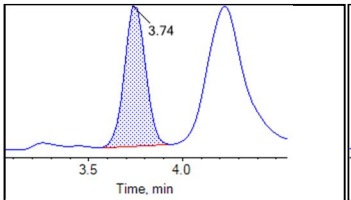
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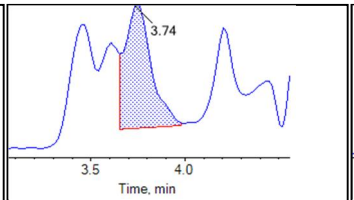
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Chromatogram Report

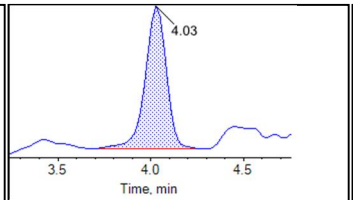
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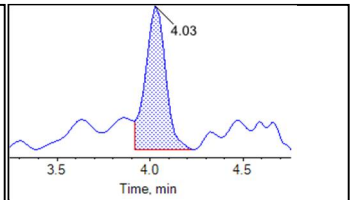
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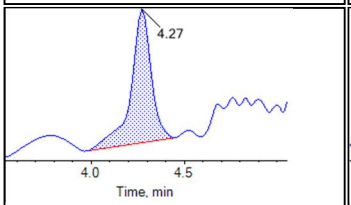
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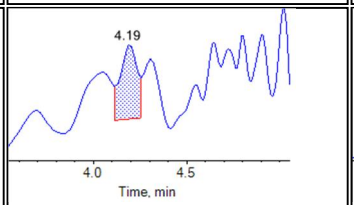
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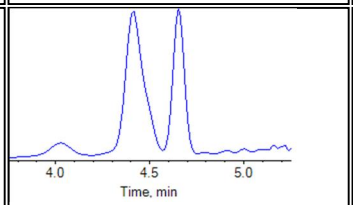
PFDoA_2



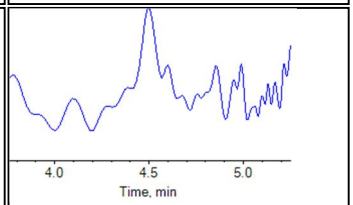
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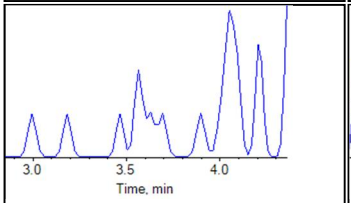
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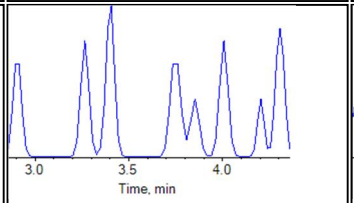
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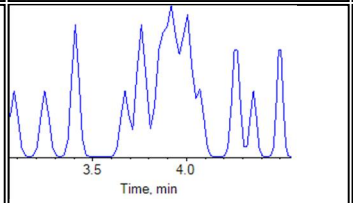
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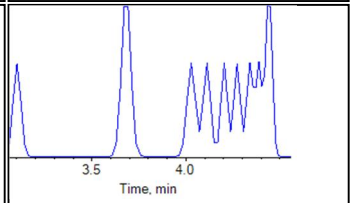
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NMeFOSAA_2

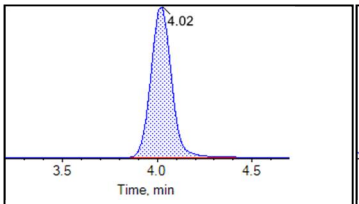


NEtFOSAA_1

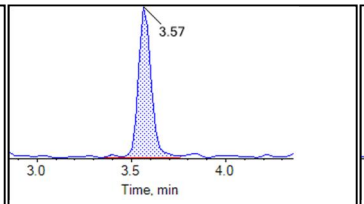


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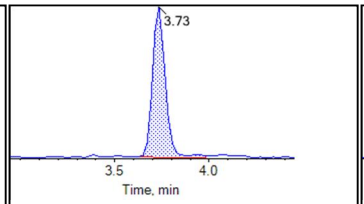
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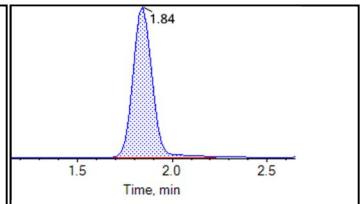
13C2-PFDoA



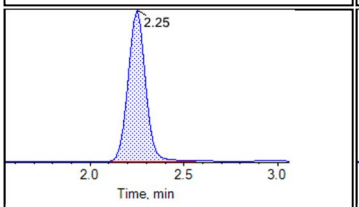
d3-MeFOSAA



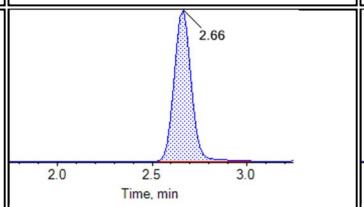
d5-EtFOSAA



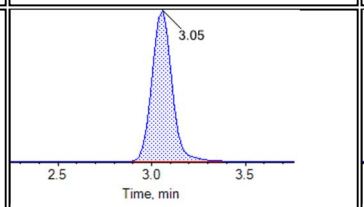
13C5-PFHxA



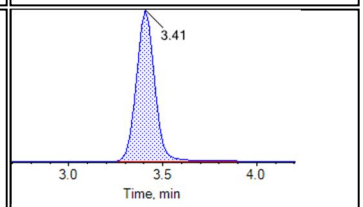
13C4-PFHpA



13C8-PFOA



13C9-PFNA

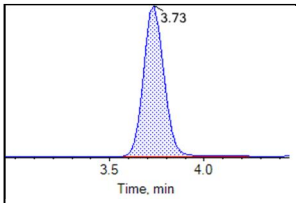


13C6-PFDA

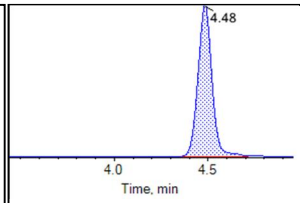
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Chromatogram Report

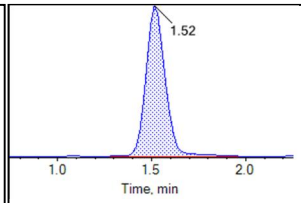
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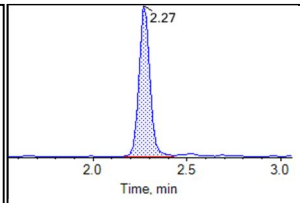
13C7-PFUnA



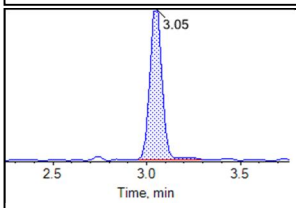
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

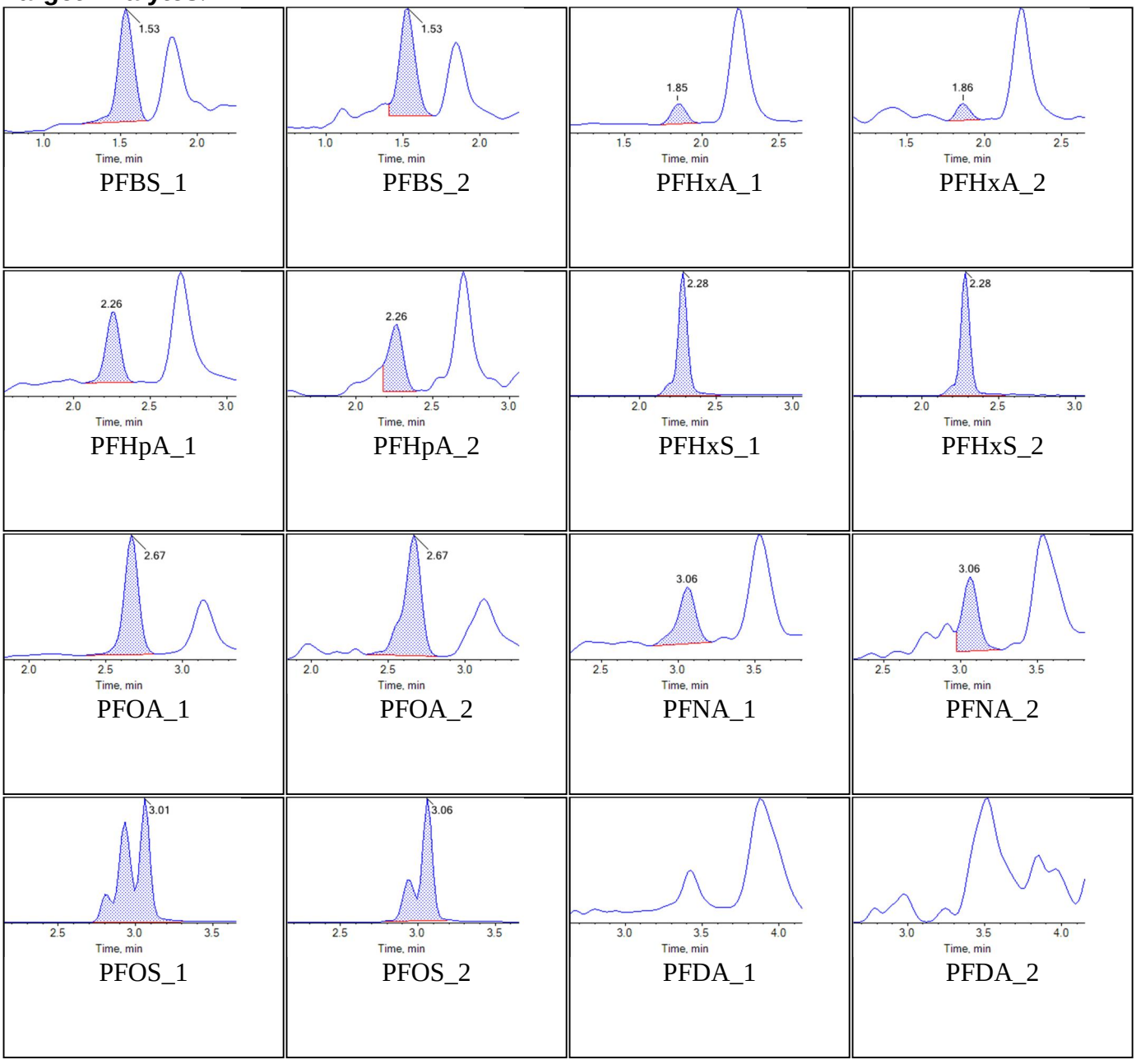
Chromatogram Report

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Sample Name	J8356-FS(3)	**Injection Vial**	36
Sample ID	VC-PM323-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:27:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

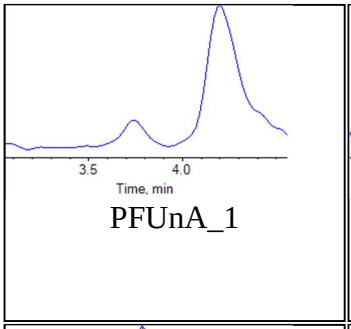
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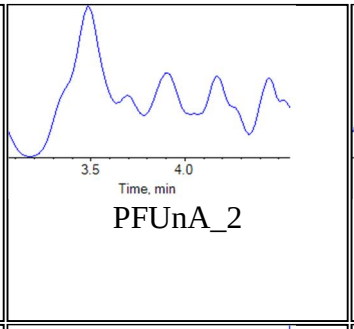
BATTELLE

Chromatogram Report

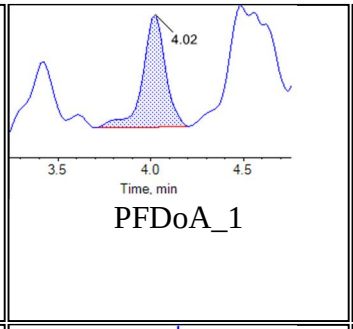
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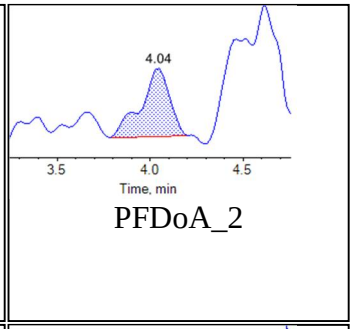
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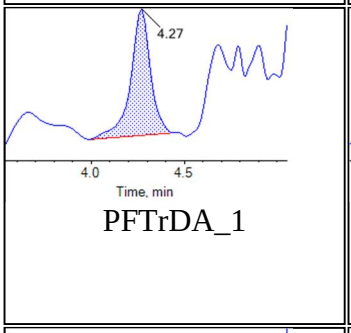
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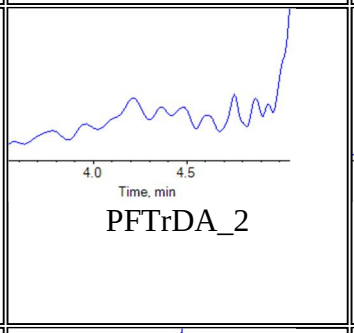
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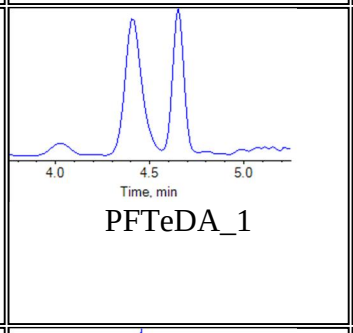
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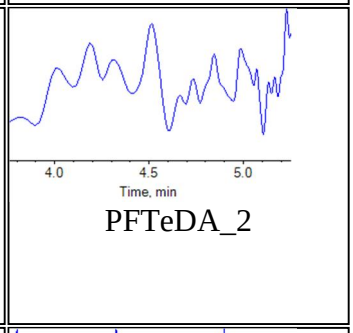
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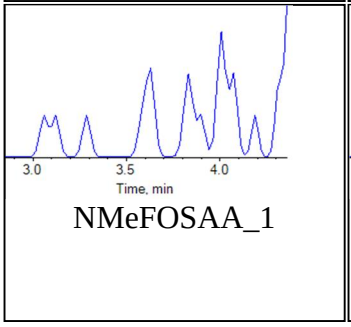
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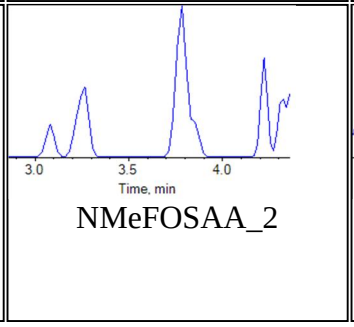
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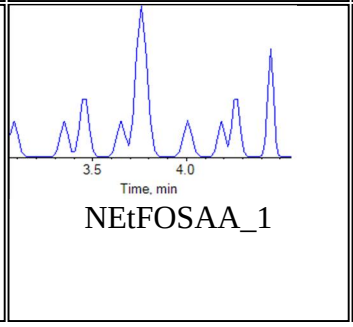
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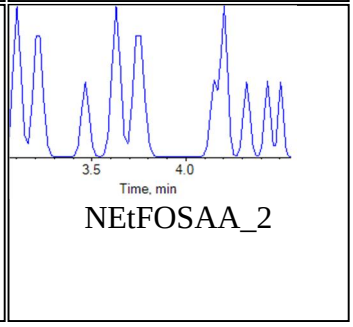
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NMeFOSAA_2

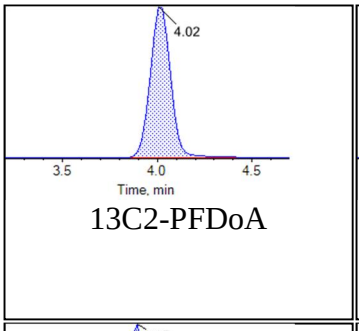


NEtFOSAA_1

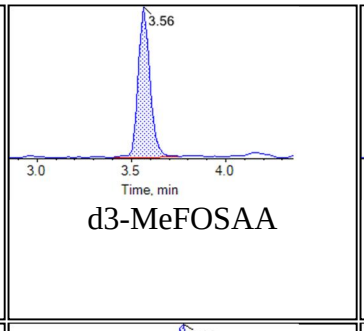


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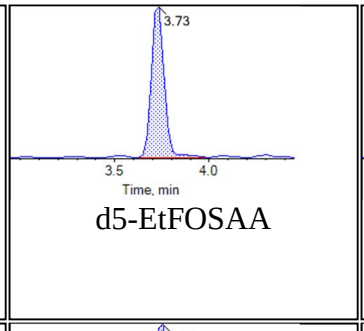
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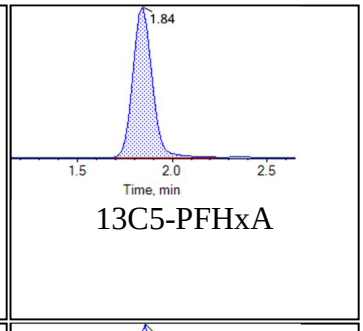
13C2-PFDoA



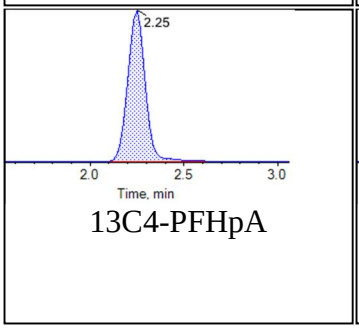
d3-MeFOSAA



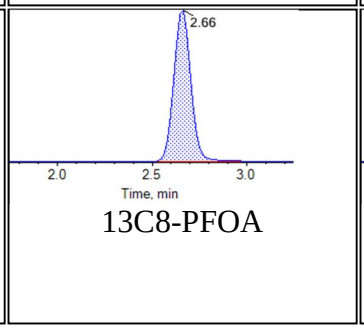
d5-EtFOSAA



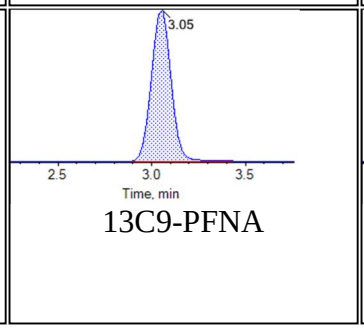
13C5-PFHxA



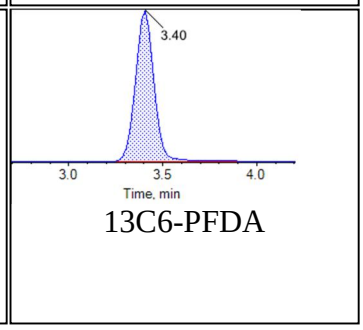
13C4-PFHpA



13C8-PFOA



13C9-PFNA

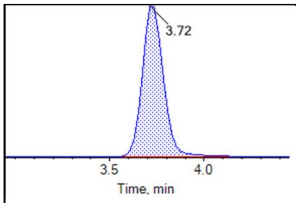


13C6-PFDA

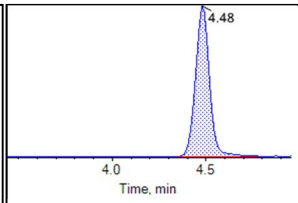
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Chromatogram Report

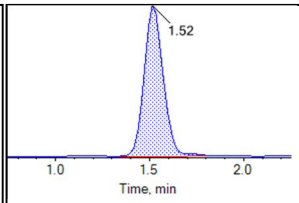
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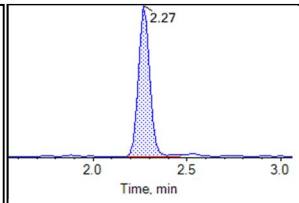
13C7-PFUnA



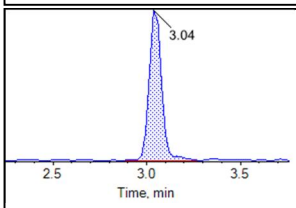
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

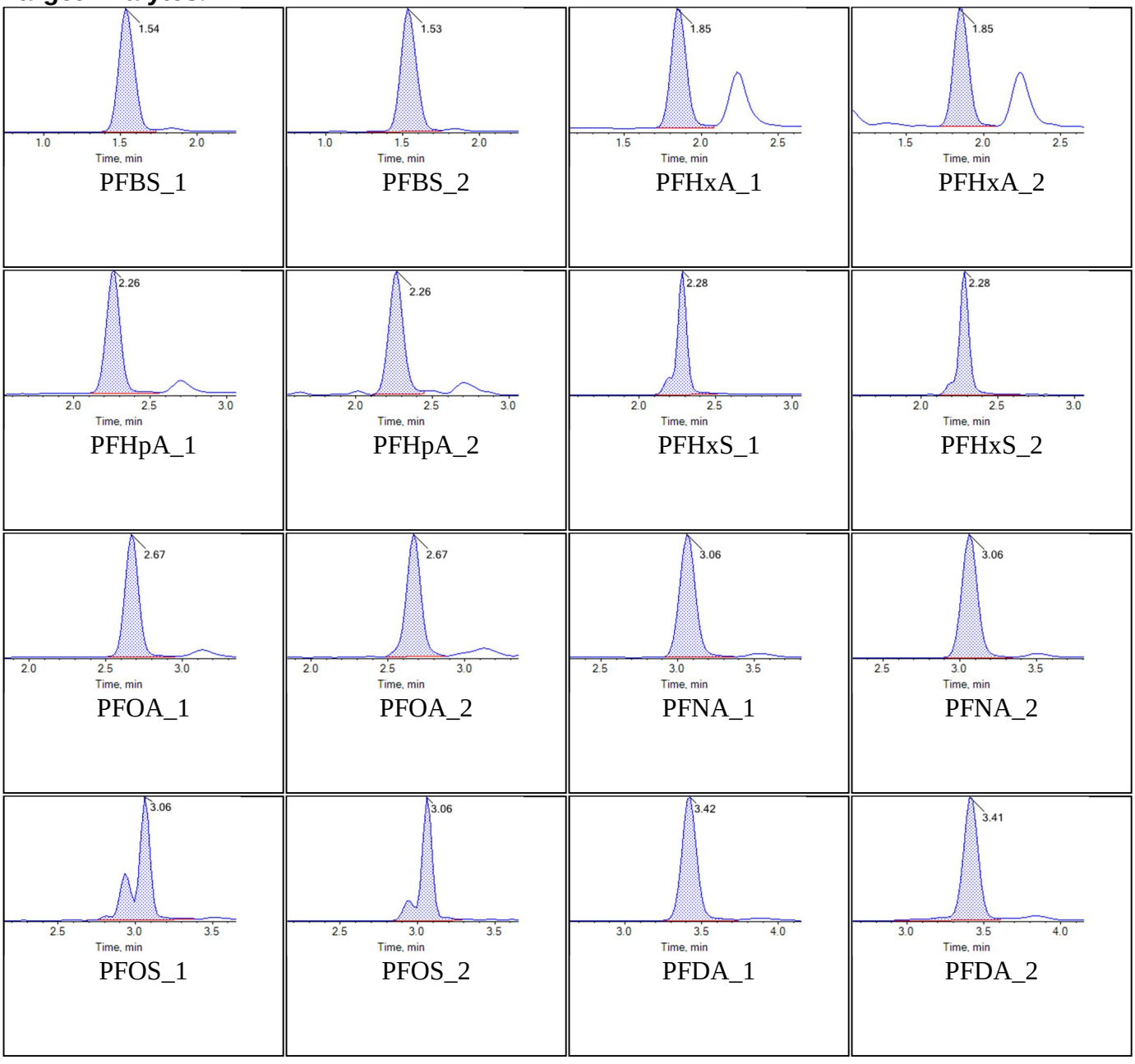
Chromatogram Report

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Printed: 09/10/2018 2:26:20 PM

Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

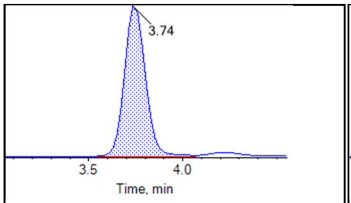
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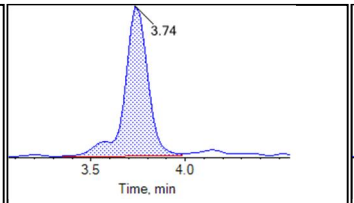
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Chromatogram Report

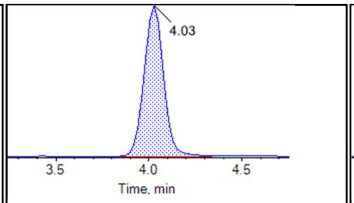
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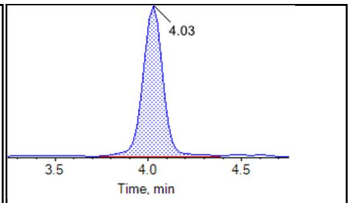
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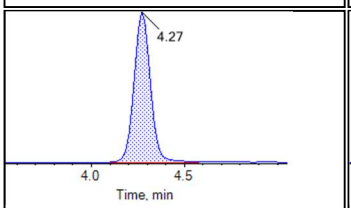
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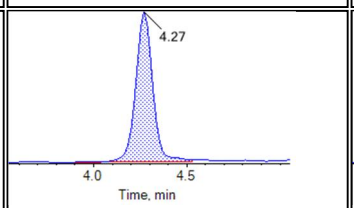
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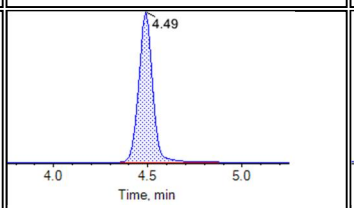
PFDoA_2



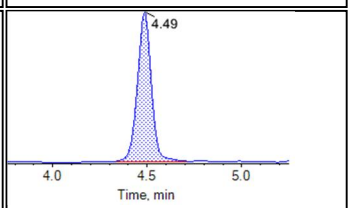
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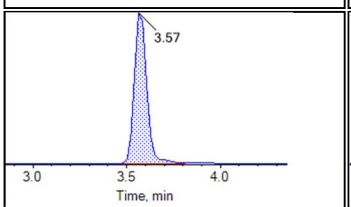
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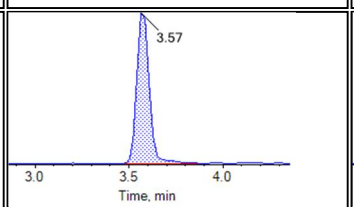
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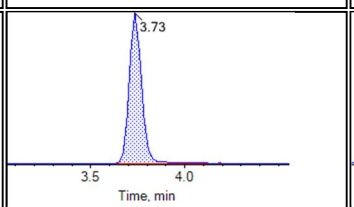
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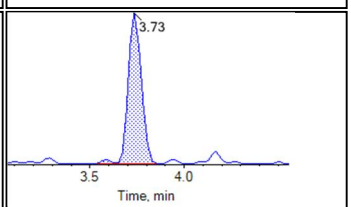
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NMeFOSAA_2

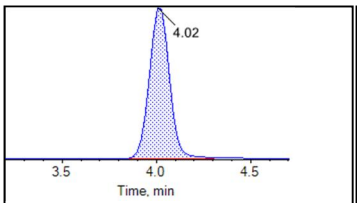


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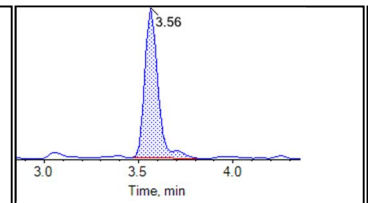


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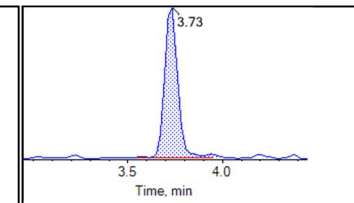
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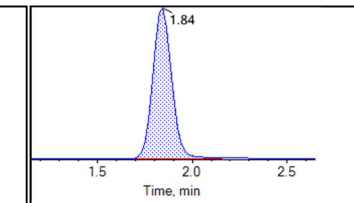
13C2-PFDoA



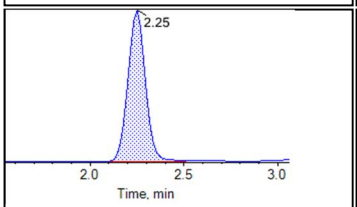
d3-MeFOSAA



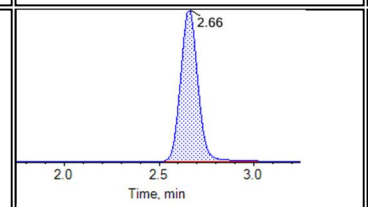
d5-EtFOSAA



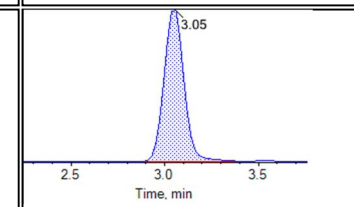
13C5-PFHxA



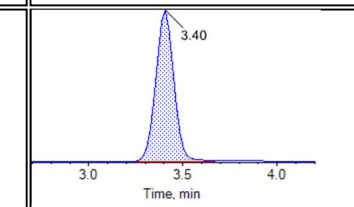
13C4-PFHpA



13C8-PFOA



13C9-PFNA

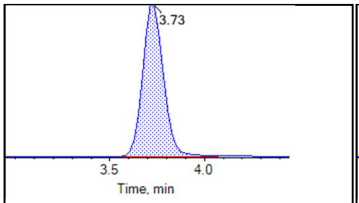


13C6-PFDA

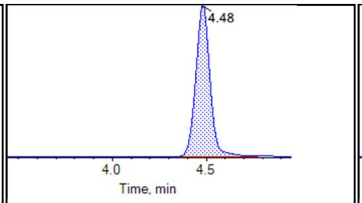
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Chromatogram Report

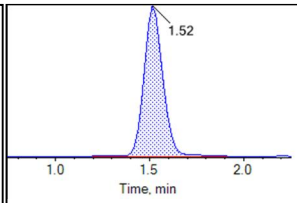
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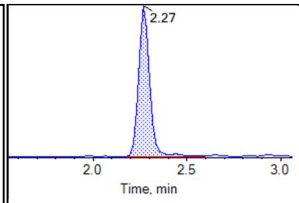
13C7-PFUnA



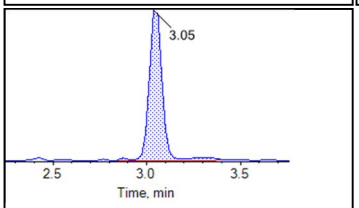
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

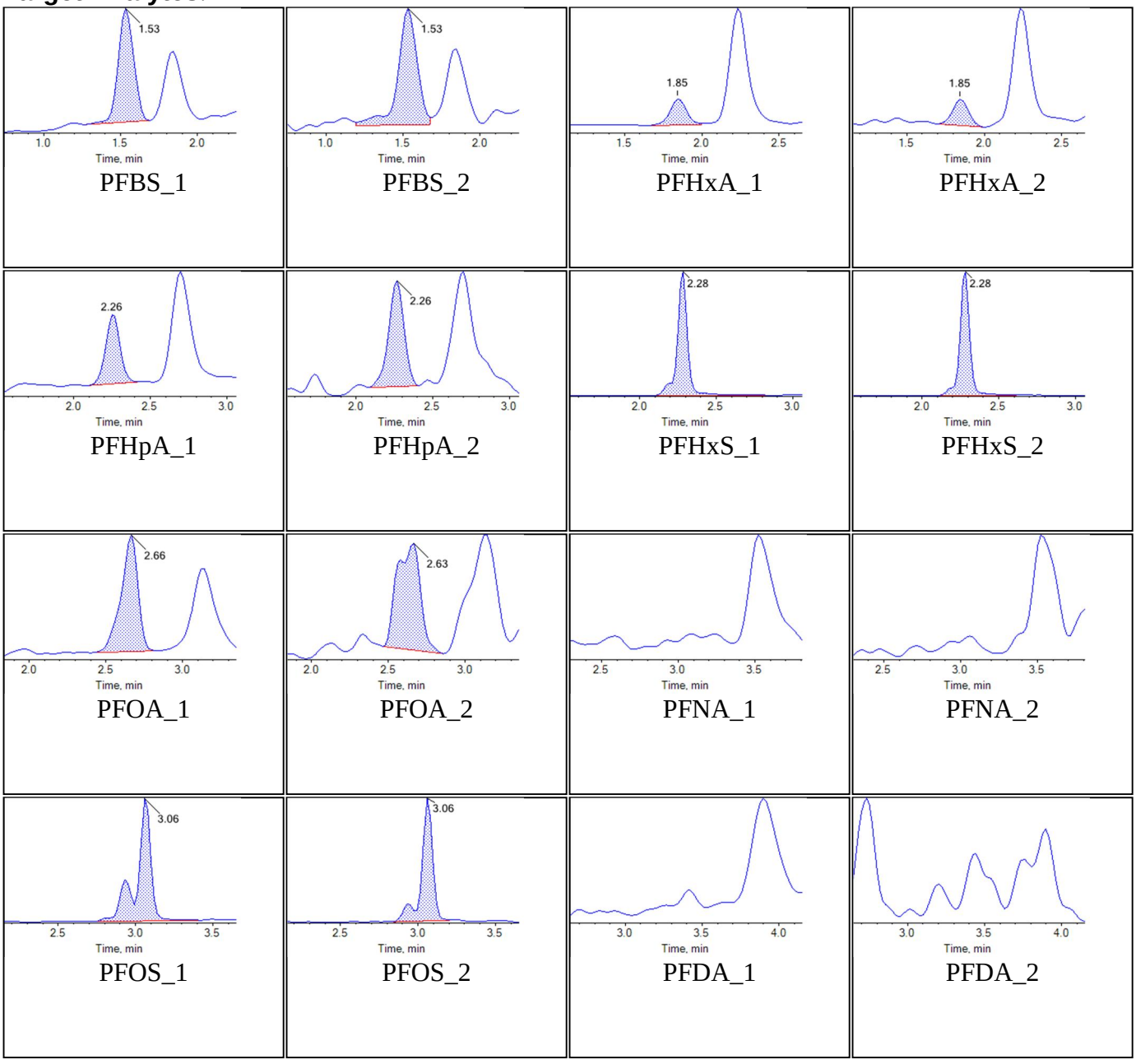
Chromatogram Report

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Sample Name	J8357-FS(3)	**Injection Vial**	39
Sample ID	VC-PM323-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:59:44	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

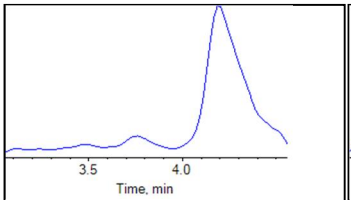
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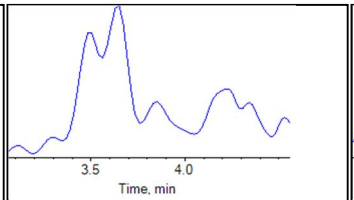
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Chromatogram Report

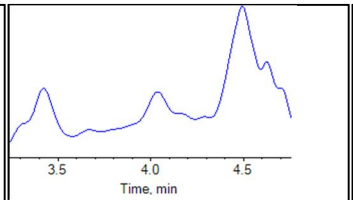
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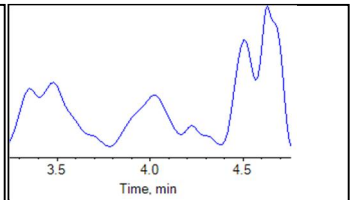
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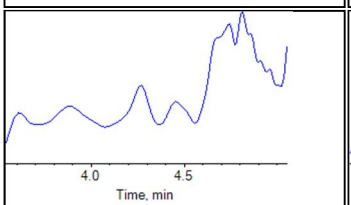
PFUnA_2



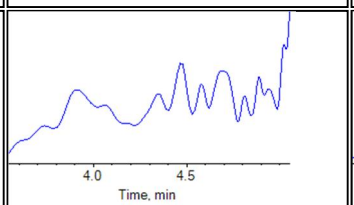
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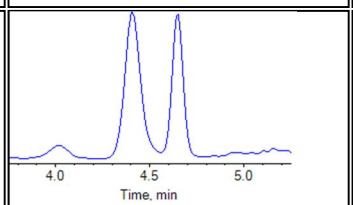
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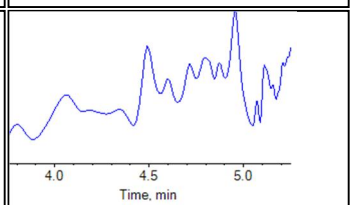
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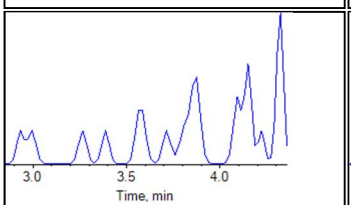
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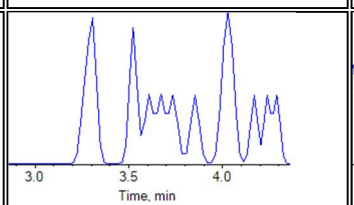
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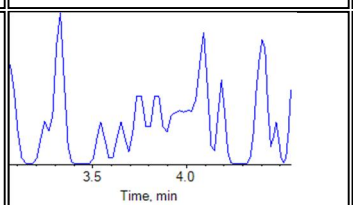
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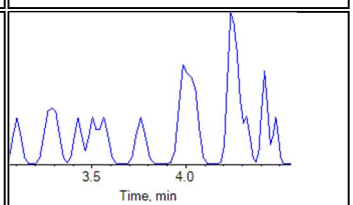
NMeFOSAA_1



NMeFOSAA_2

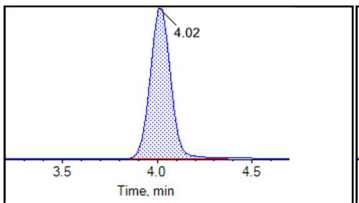


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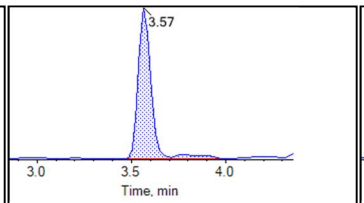


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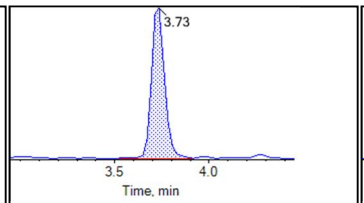
Internal Standards:



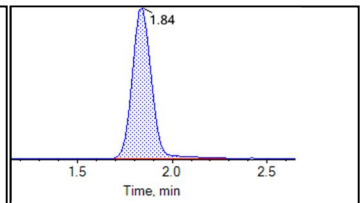
13C2-PFDoA



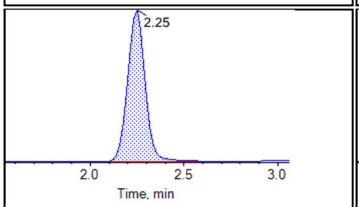
d3-MeFOSAA



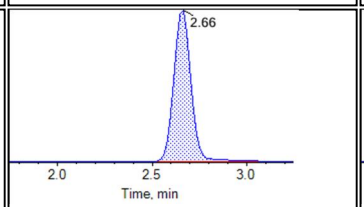
d5-EtFOSAA



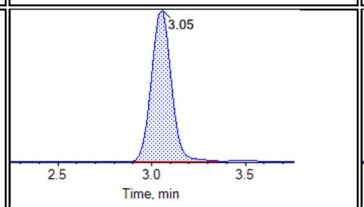
13C5-PFHxA



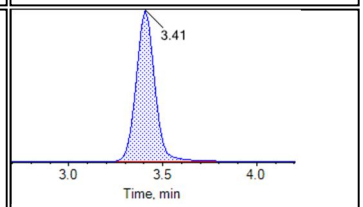
13C4-PFHpA



13C8-PFOA



13C9-PFNA

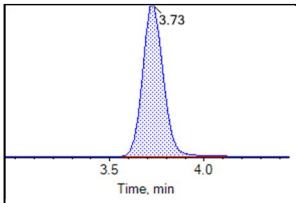


13C6-PFDA

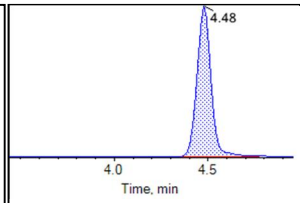
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Chromatogram Report

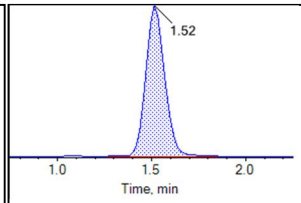
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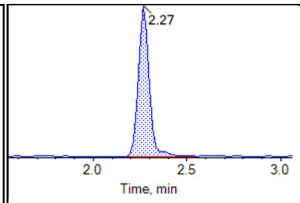
13C7-PFUnA



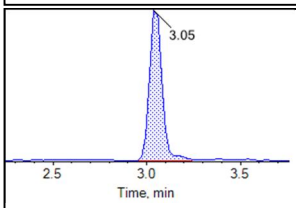
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

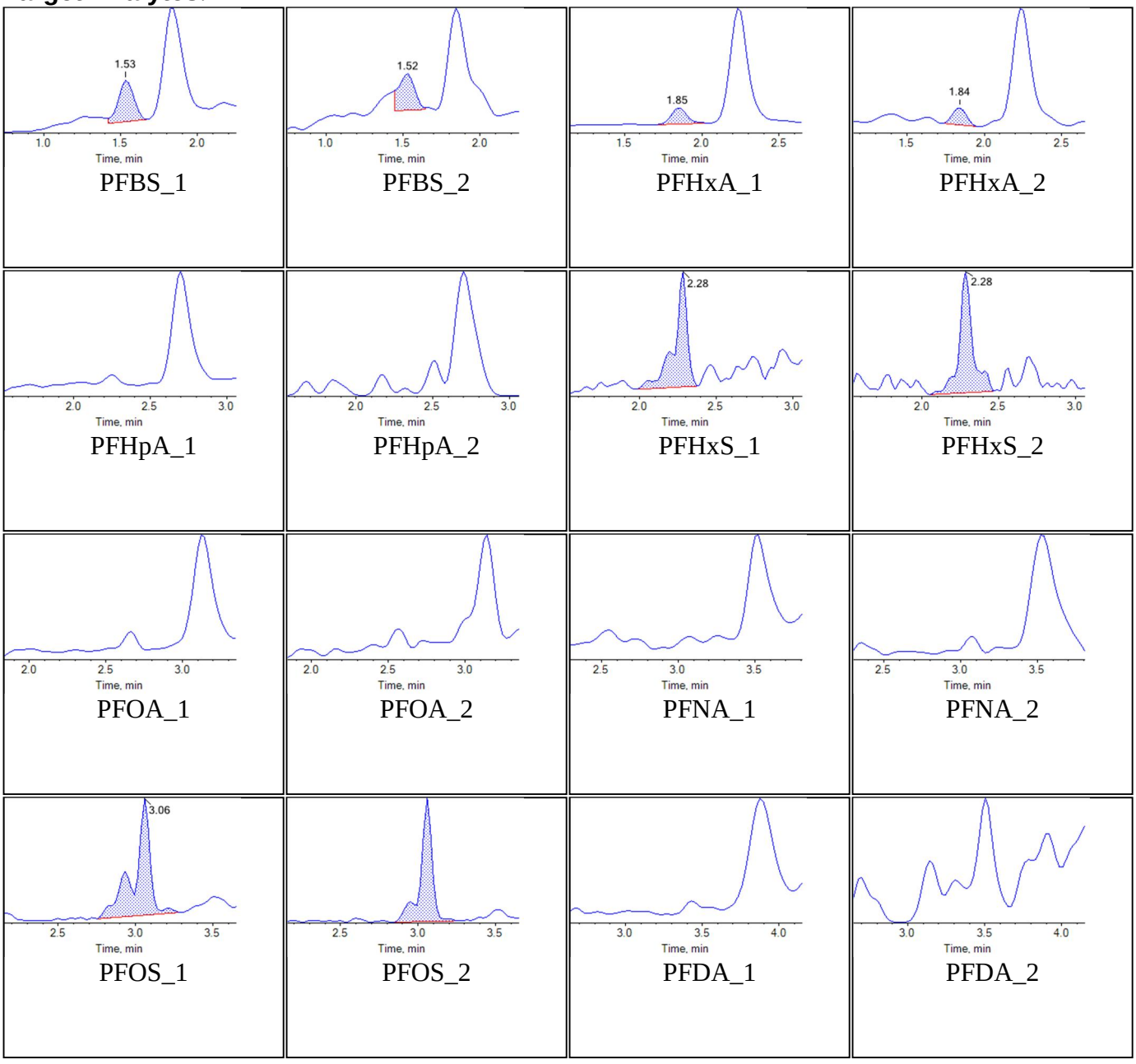
Chromatogram Report

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Printed: 09/10/2018 2:26:36 PM

Sample Name	J8360-FS(3)	**Injection Vial**	40
Sample ID	VC-PM324-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:10:35	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

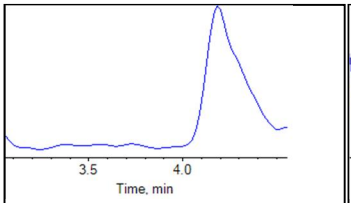
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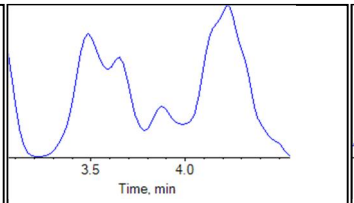
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Chromatogram Report

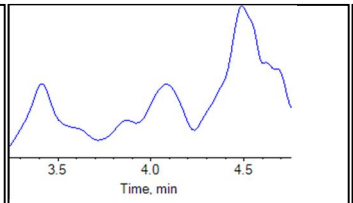
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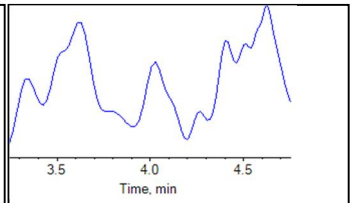
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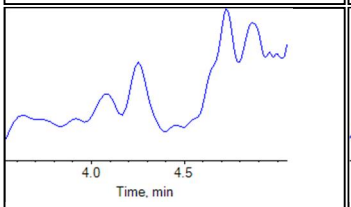
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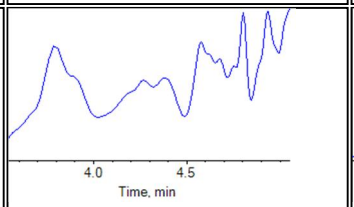
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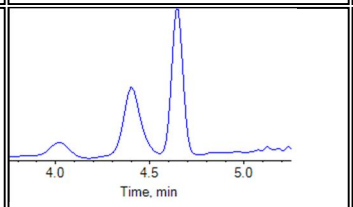
PFDoA_2



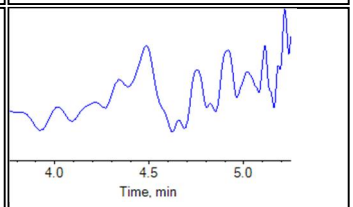
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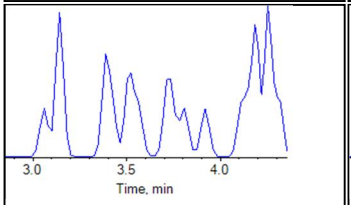
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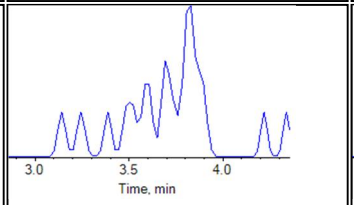
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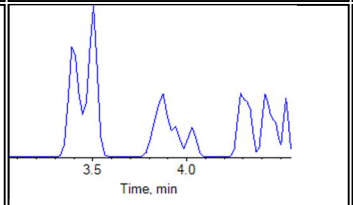
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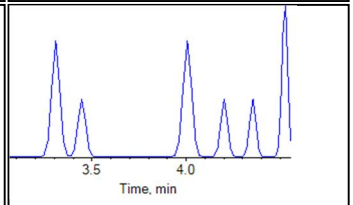
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NMeFOSAA_2

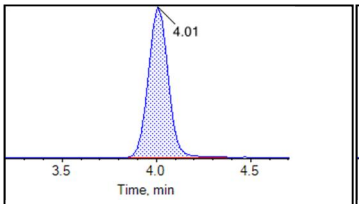


NEtFOSAA_1

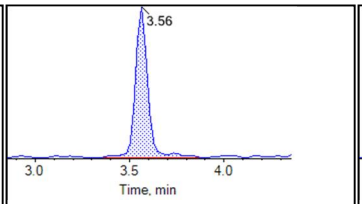


NEtFOSAA_2

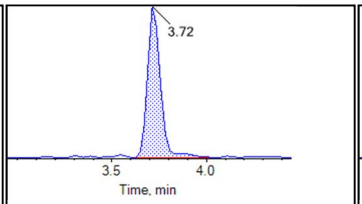
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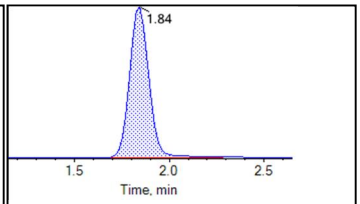
13C2-PFDoA



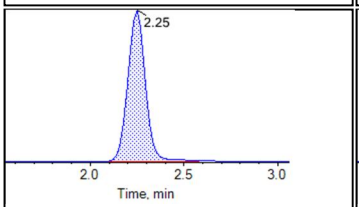
d3-MeFOSAA



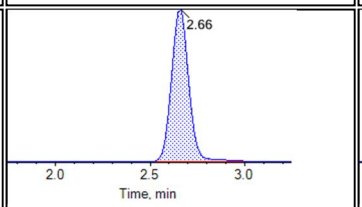
d5-EtFOSAA



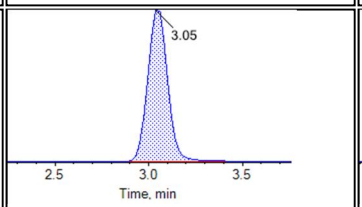
13C5-PFHxA



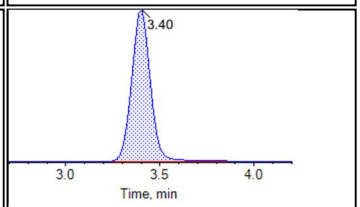
13C4-PFHpA



13C8-PFOA



13C9-PFNA

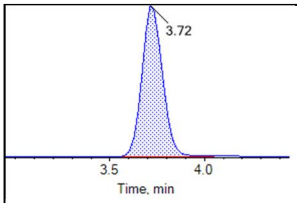


13C6-PFDA

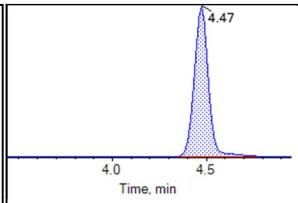
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Chromatogram Report

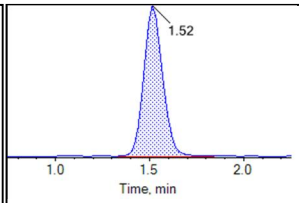
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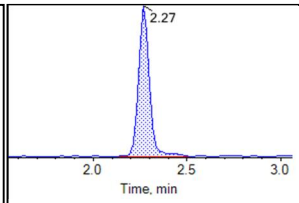
13C7-PFUnA



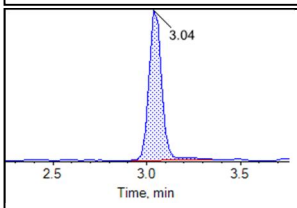
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

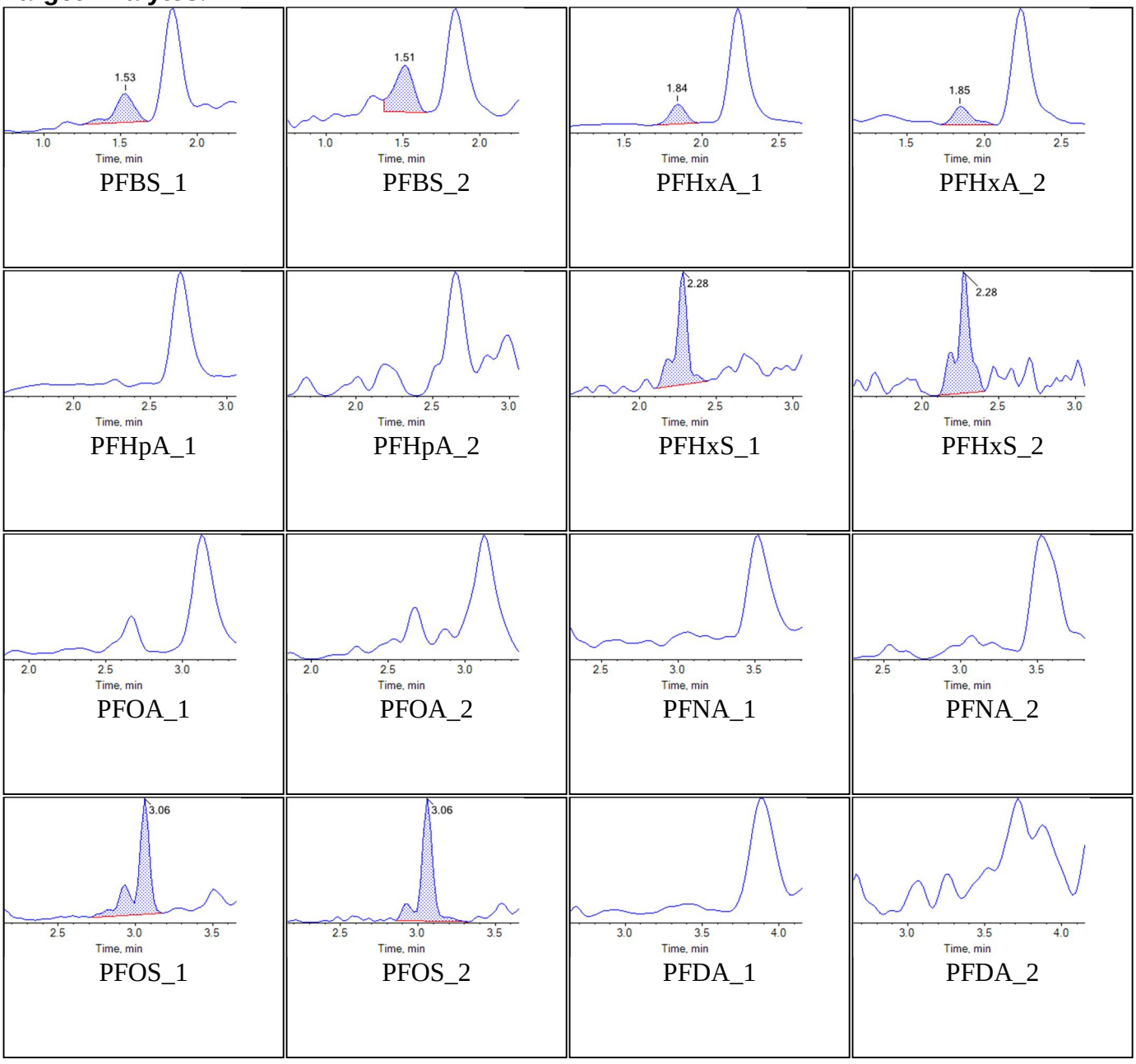
Chromatogram Report

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Sample Name	J8361-FS(3)	**Injection Vial**	41
Sample ID	VC-PM324-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:21:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

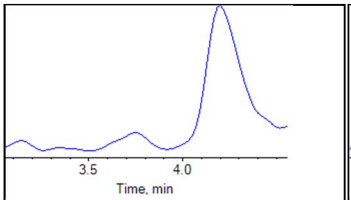
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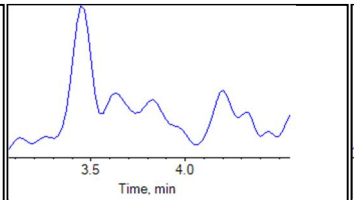
BATTELLE

Chromatogram Report

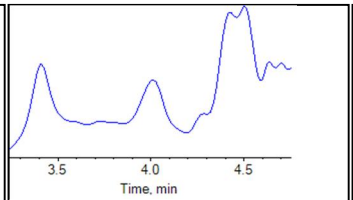
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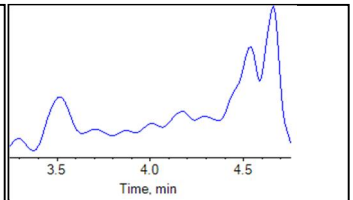
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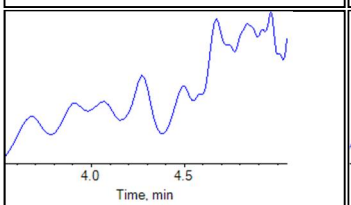
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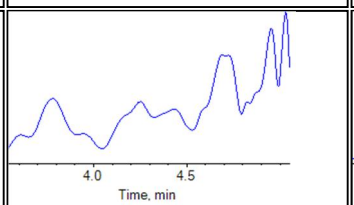
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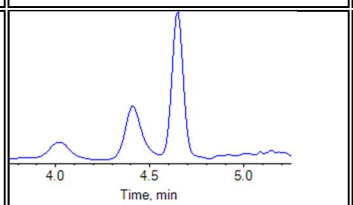
PFDoA_2



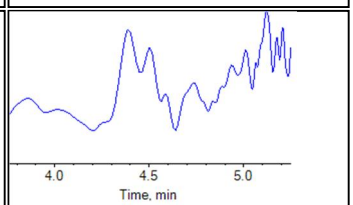
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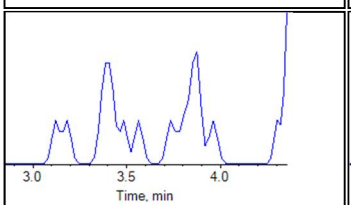
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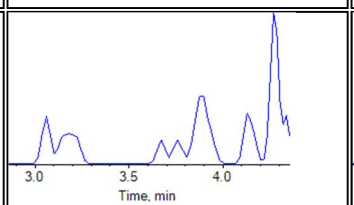
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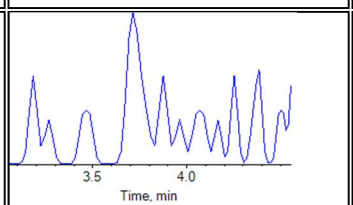
PFTeDA_2



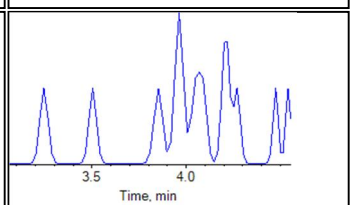
NMeFOSAA_1



NMeFOSAA_2

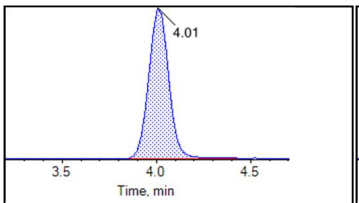


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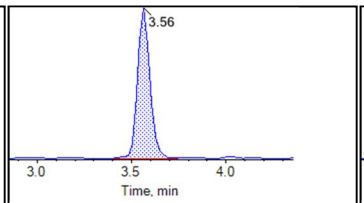


NEtFOSAA_2

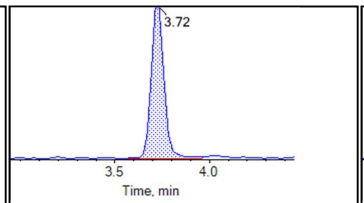
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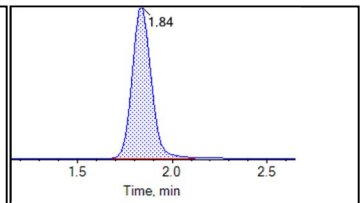
13C2-PFDoA



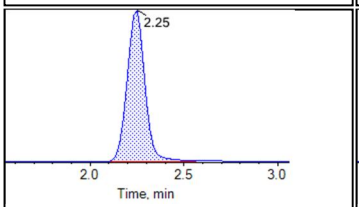
d3-MeFOSAA



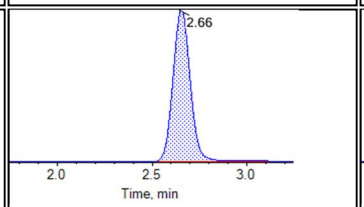
d5-EtFOSAA



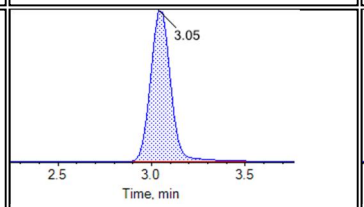
13C5-PFHxA



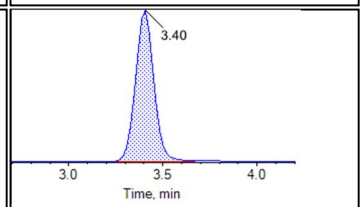
13C4-PFHpA



13C8-PFOA



13C9-PFNA

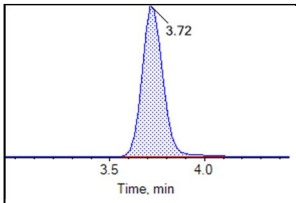


13C6-PFDA

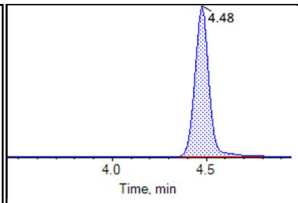
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Chromatogram Report

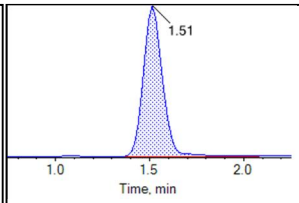
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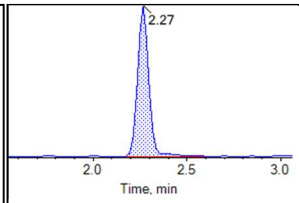
13C7-PFUnA



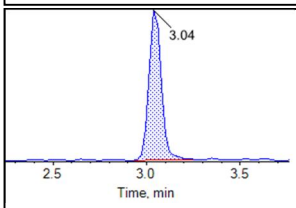
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

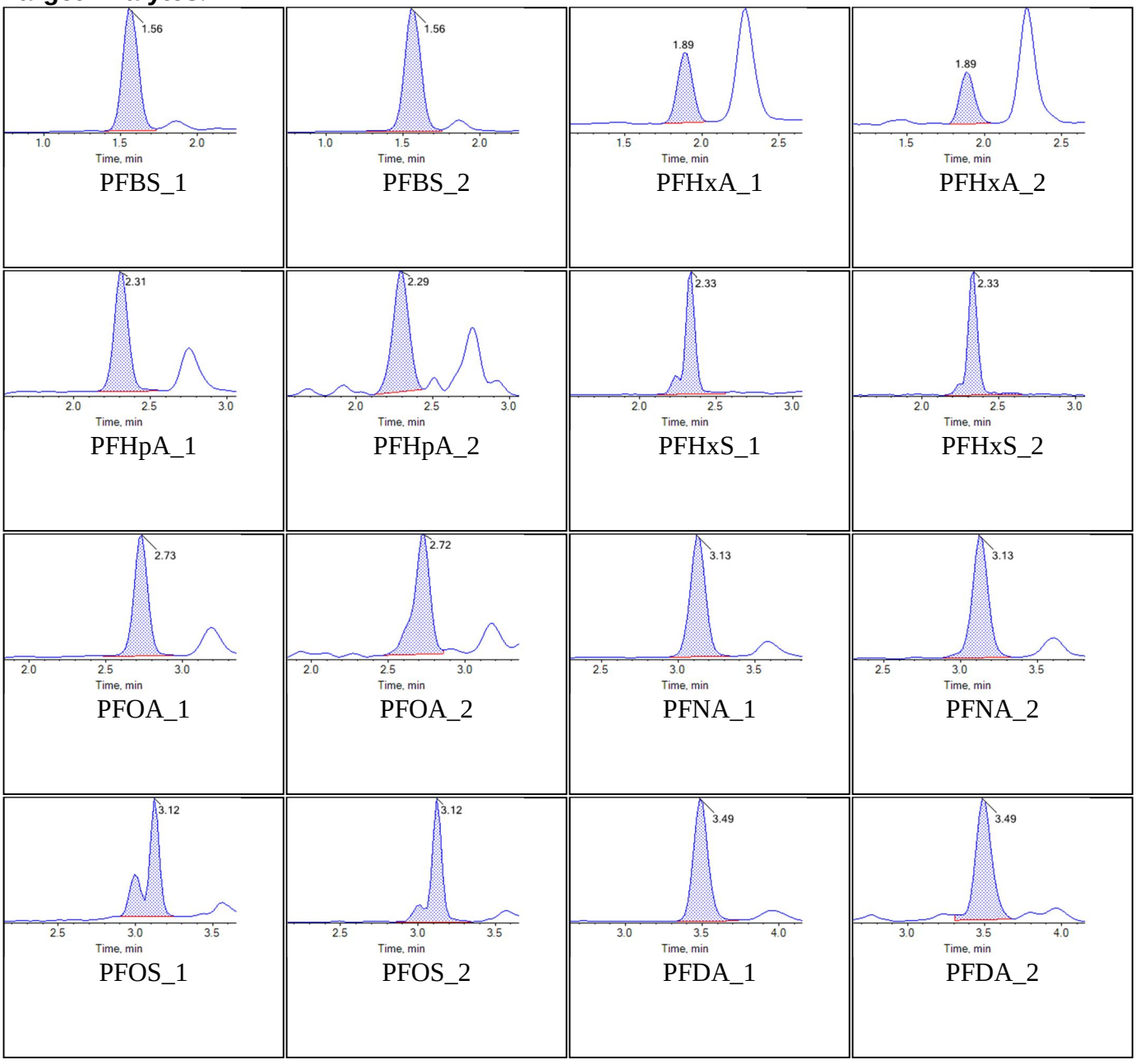
Chromatogram Report

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Printed: 09/10/2018 2:24:23 PM

Sample Name	KB74	**Injection Vial**	3
Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T15:51:02	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

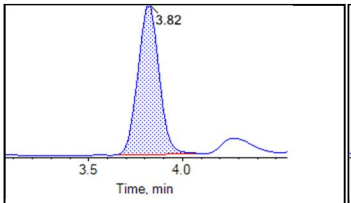
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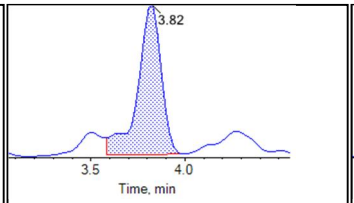
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Chromatogram Report

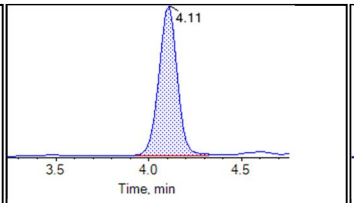
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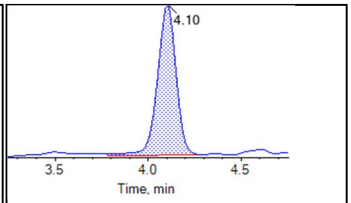
PFUnA_1



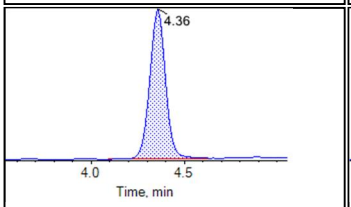
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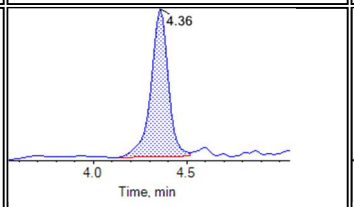
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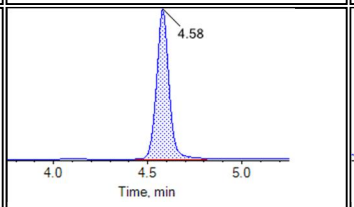
PFDoA_2



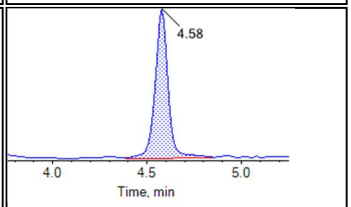
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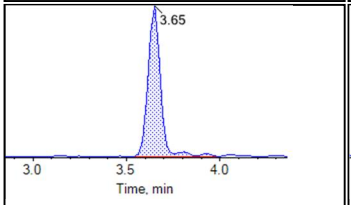
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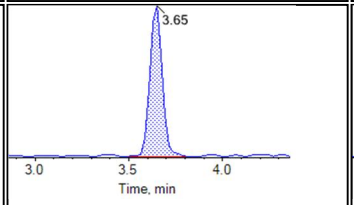
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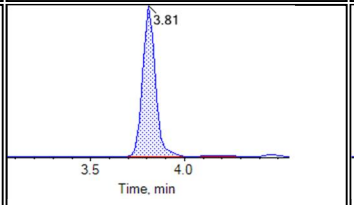
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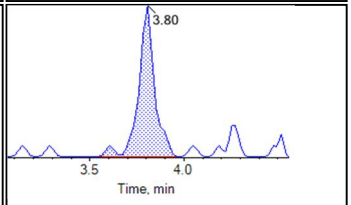
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NMeFOSAA_2

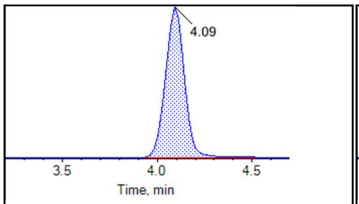


NEtFOSAA_1

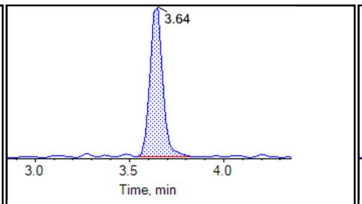


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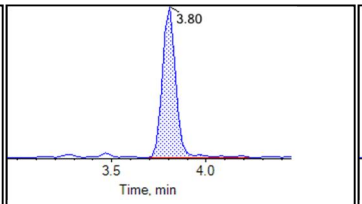
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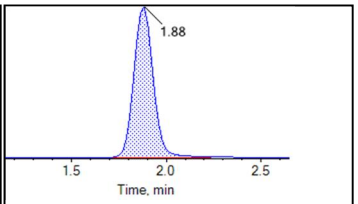
13C2-PFDoA



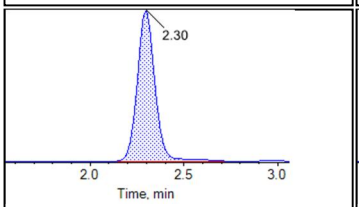
d3-MeFOSAA



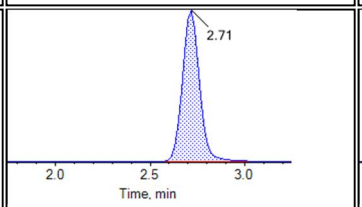
d5-EtFOSAA



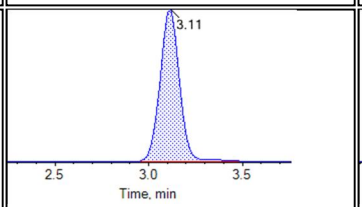
13C5-PFHxA



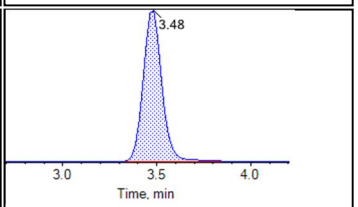
13C4-PFHpA



13C8-PFOA



13C9-PFNA

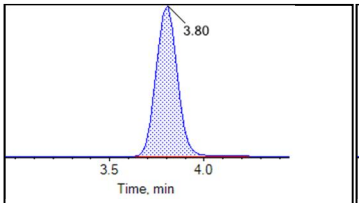


13C6-PFDA

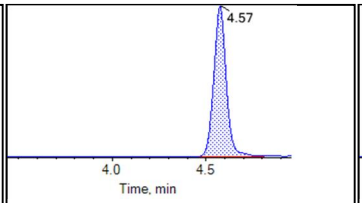
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Chromatogram Report

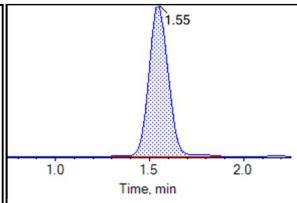
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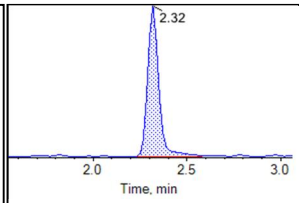
13C7-PFUnA



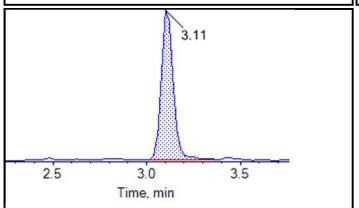
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

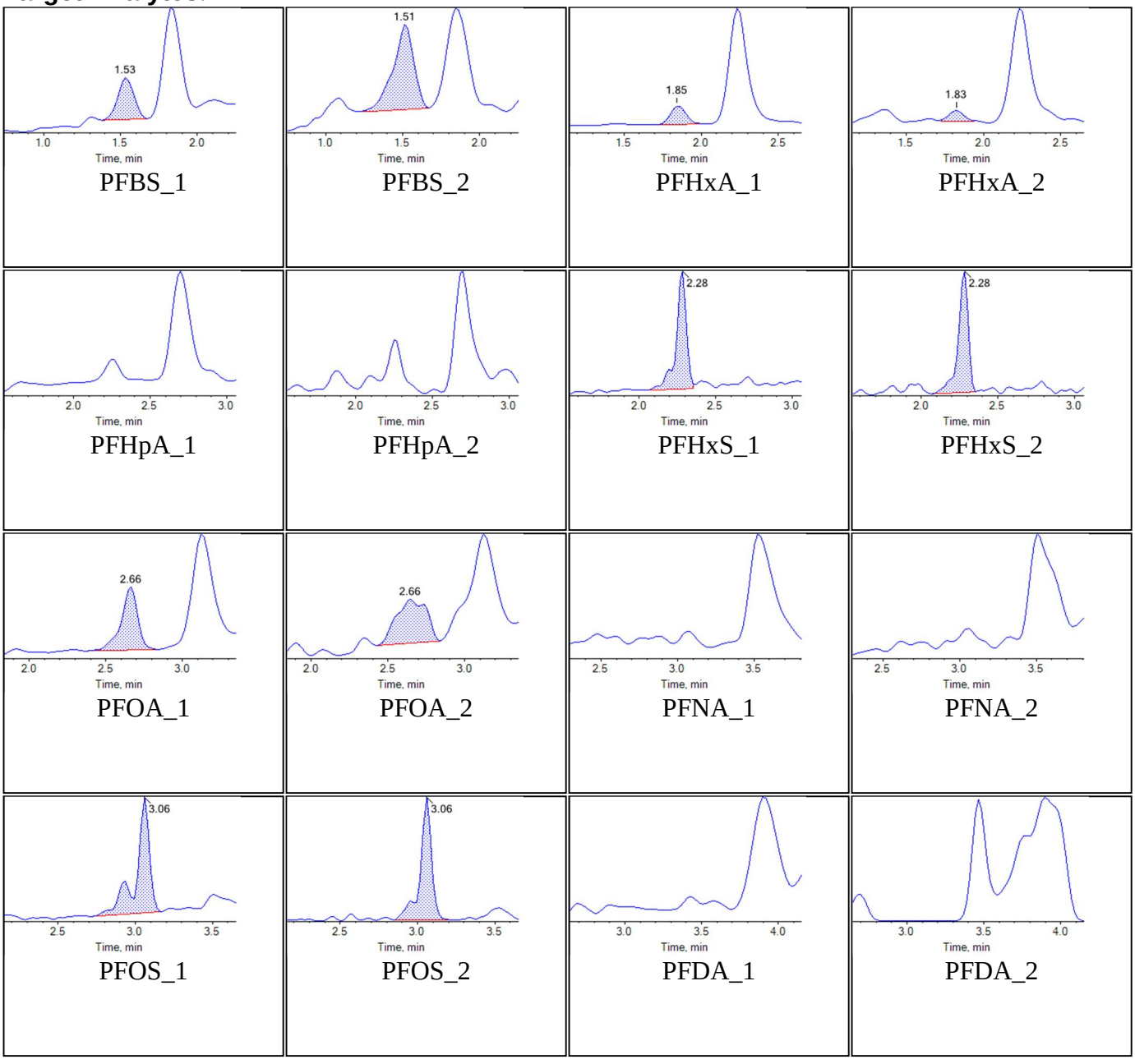
Chromatogram Report

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Sample Name	J8362-FS(3)	**Injection Vial**	42
Sample ID	VC-PM324-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:32:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

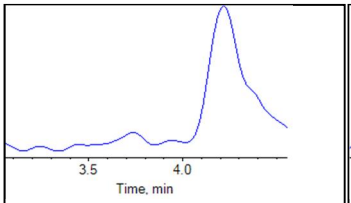
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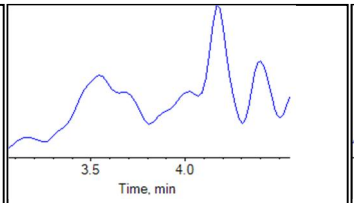
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Chromatogram Report

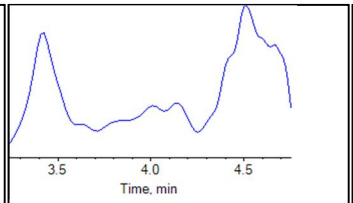
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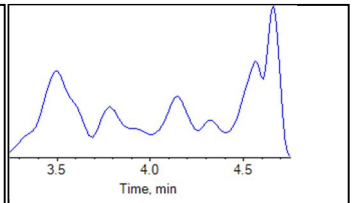
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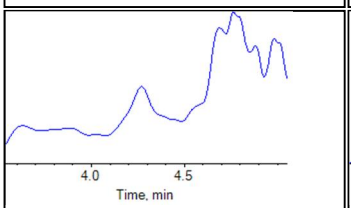
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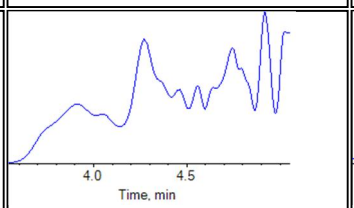
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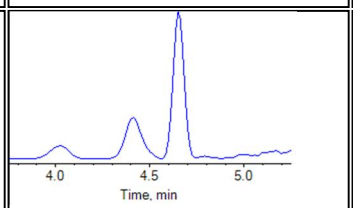
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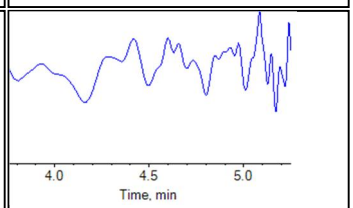
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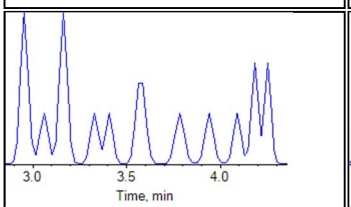
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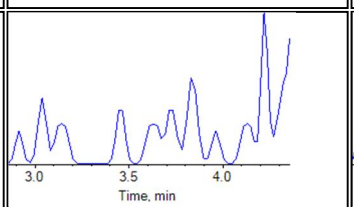
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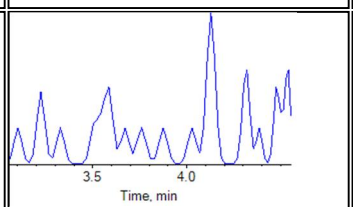
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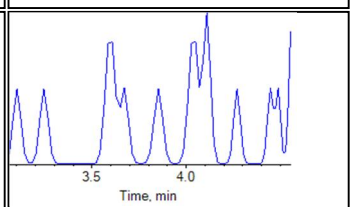
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NMeFOSAA_2

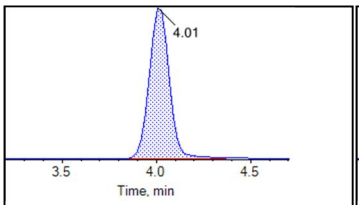


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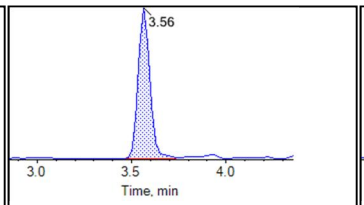


NEtFOSAA_2

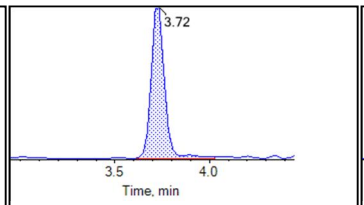
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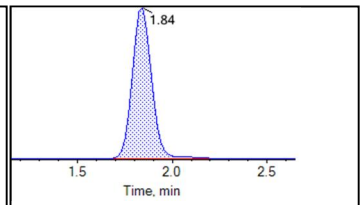
13C2-PFDoA



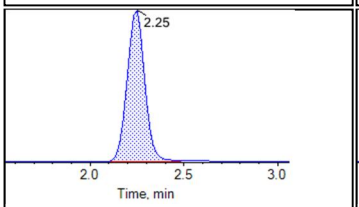
d3-MeFOSAA



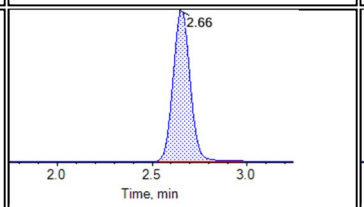
d5-EtFOSAA



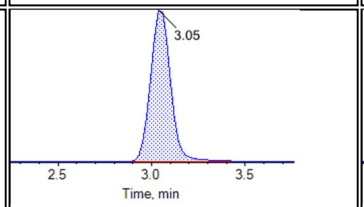
13C5-PFHxA



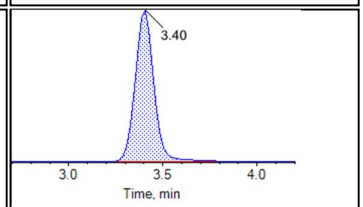
13C4-PFHpA



13C8-PFOA



13C9-PFNA

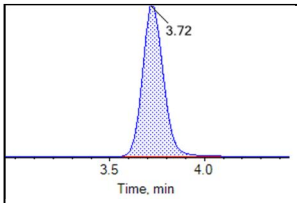


13C6-PFDA

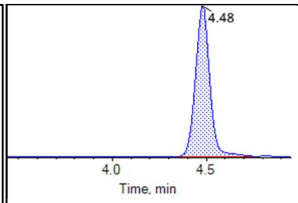
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Chromatogram Report

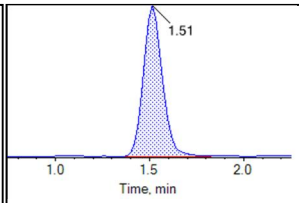
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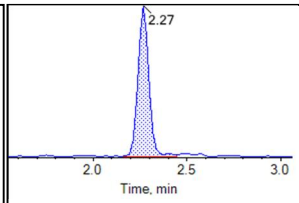
13C7-PFUnA



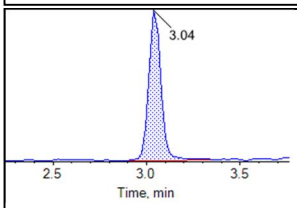
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

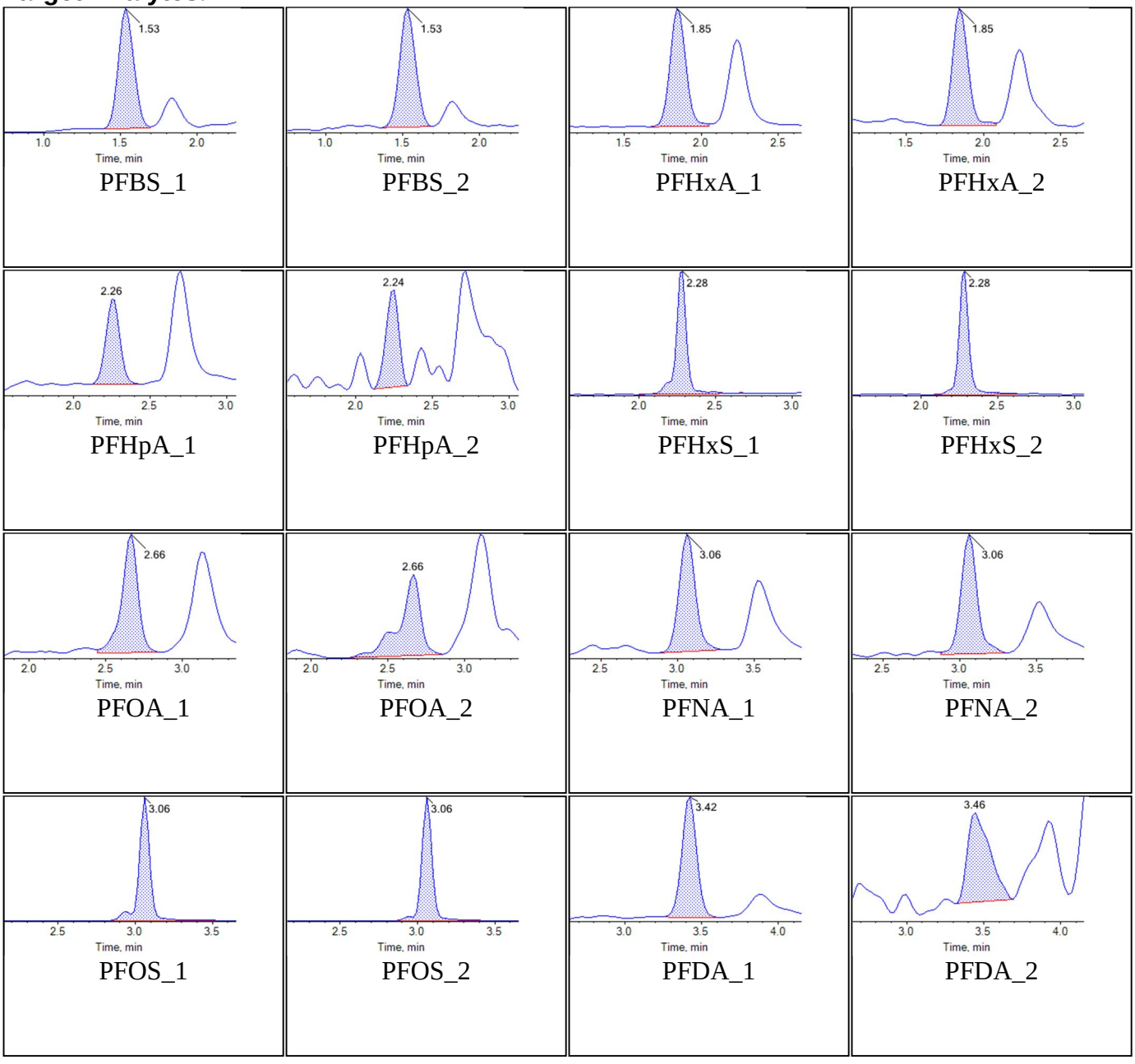
Chromatogram Report

Created with Analyst Reporter
Printed: 09/10/2018 2:26:51 PM

Sample Name	J8363-FS(3)	**Injection Vial**	43
Sample ID	VC-PM324-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:43:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

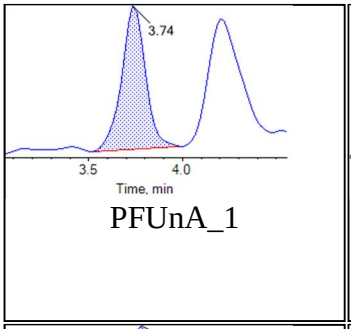
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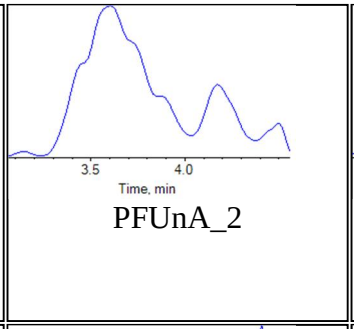
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Chromatogram Report

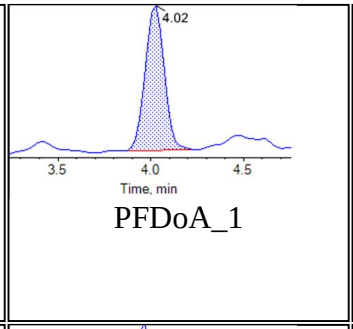
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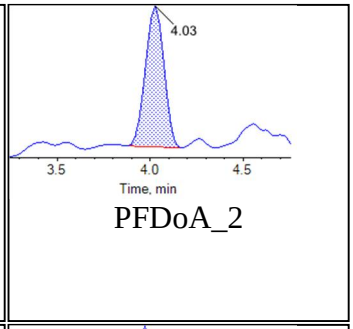
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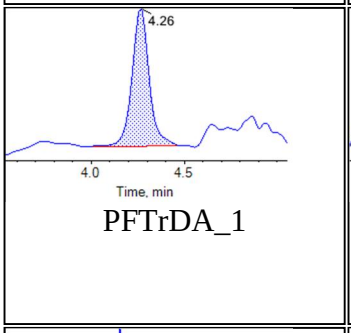
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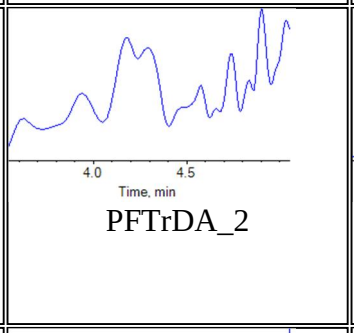
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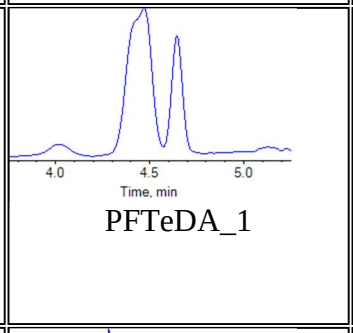
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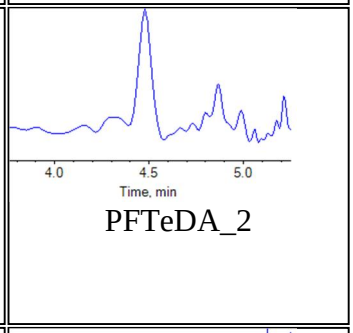
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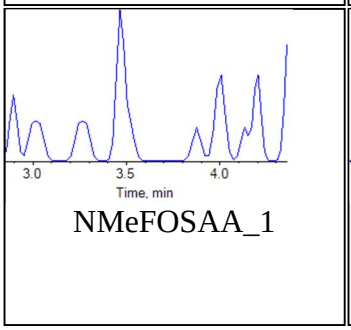
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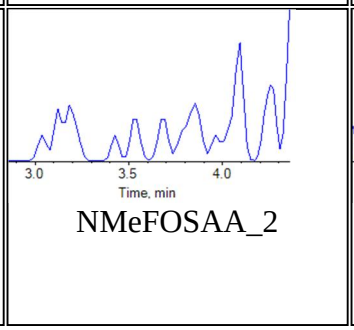
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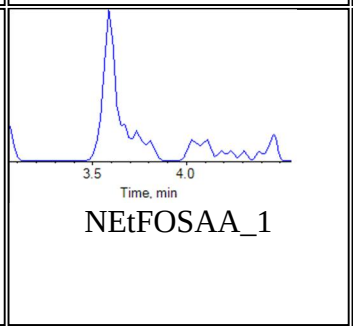
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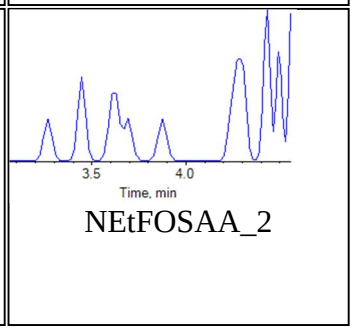
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NMeFOSAA_2

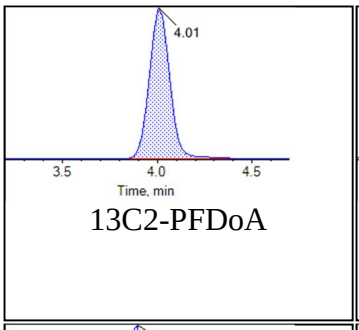


NEtFOSAA_1

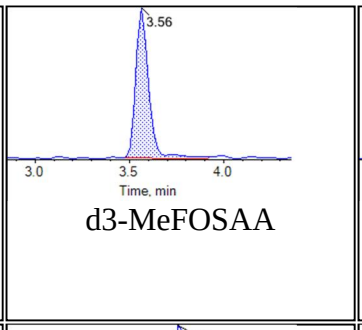


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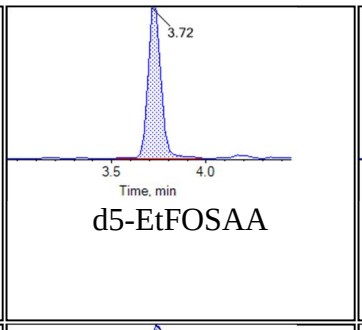
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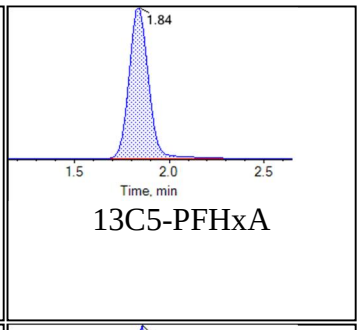
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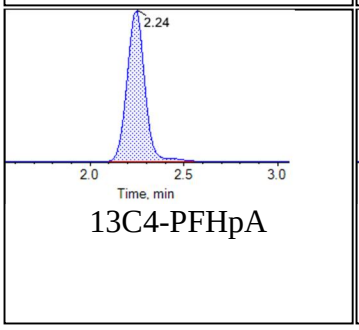
d3-MeFOSAA



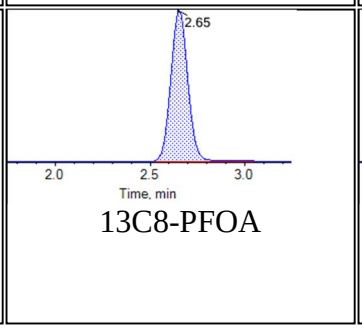
d5-EtFOSAA



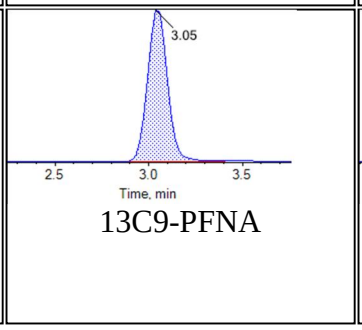
13C5-PFHxA



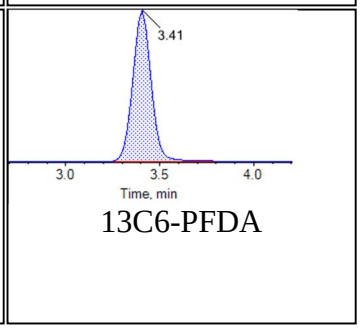
13C4-PFHpA



13C8-PFOA



13C9-PFNA

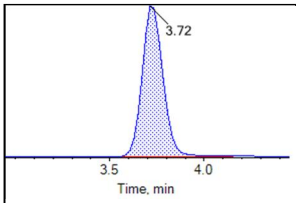


13C6-PFDA

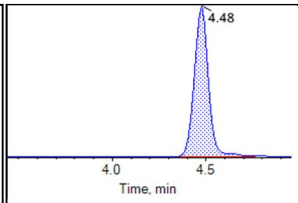
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Chromatogram Report

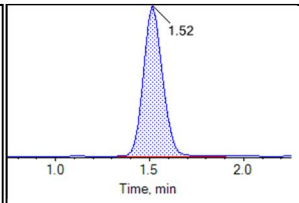
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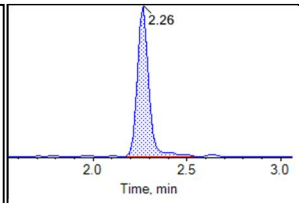
13C7-PFUnA



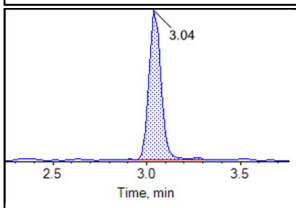
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

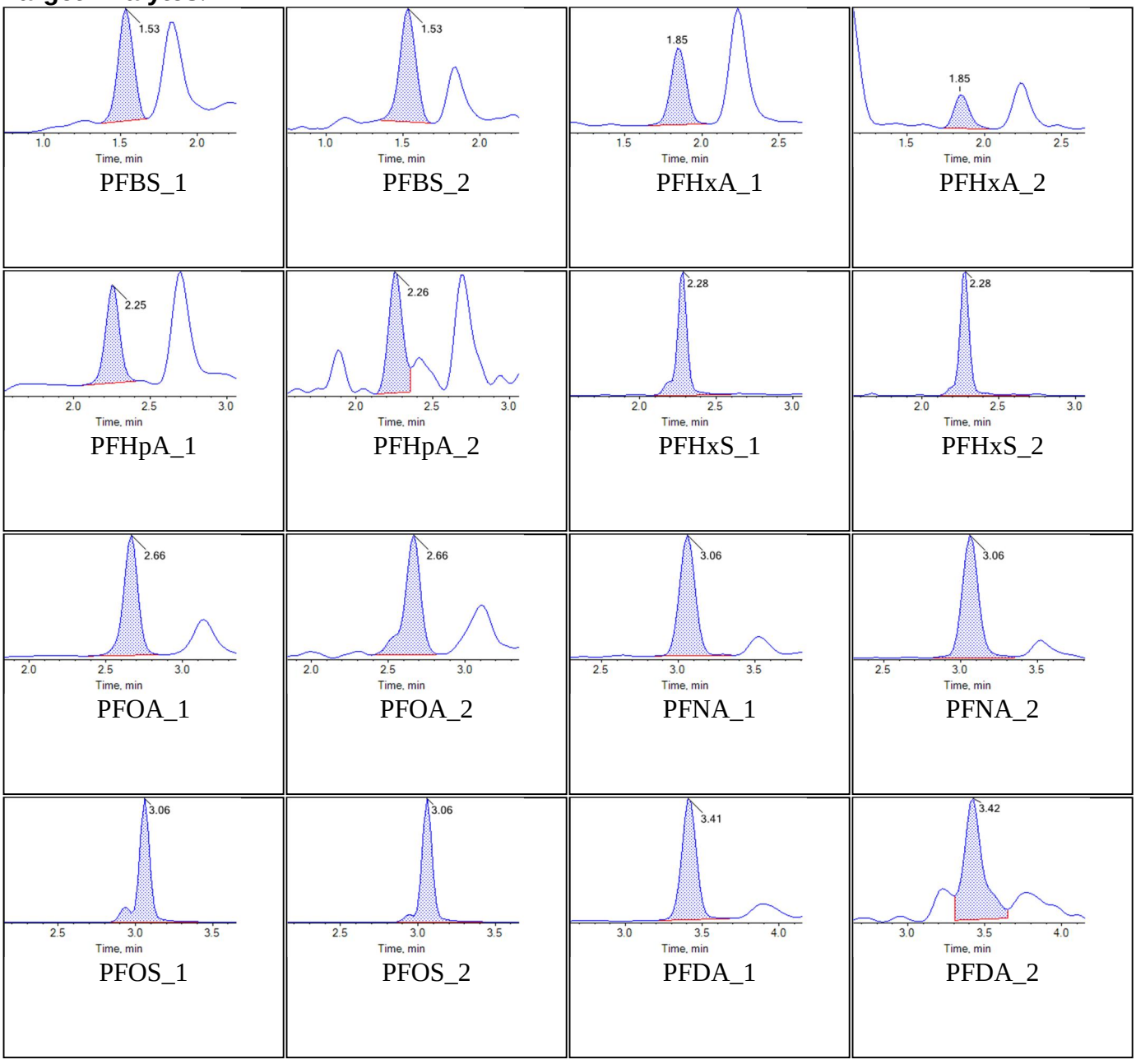
Chromatogram Report

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Sample Name	J8364-FS(3)	**Injection Vial**	44
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:54:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

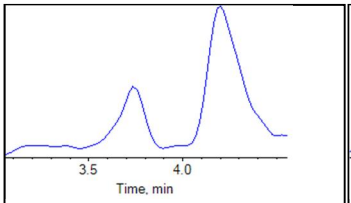
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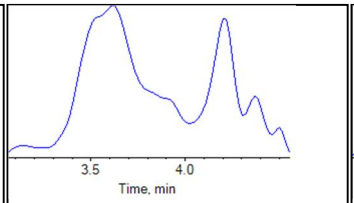
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Chromatogram Report

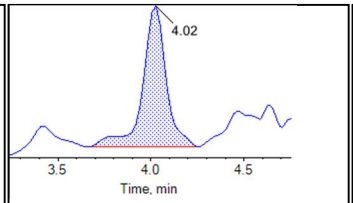
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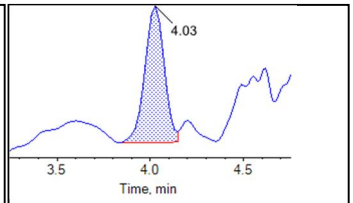
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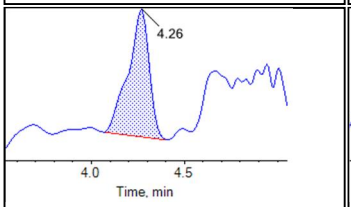
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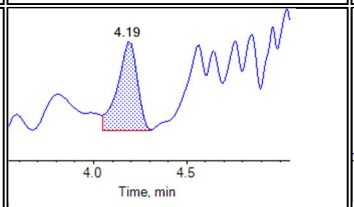
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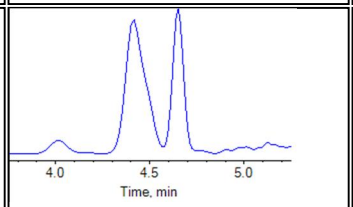
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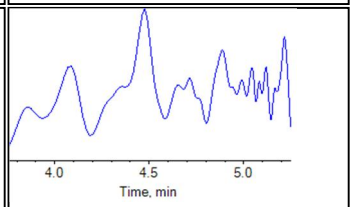
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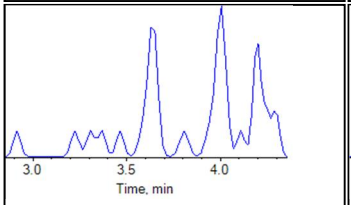
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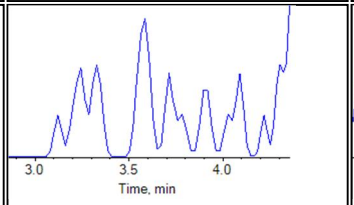
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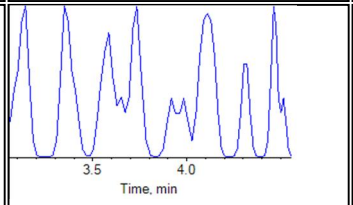
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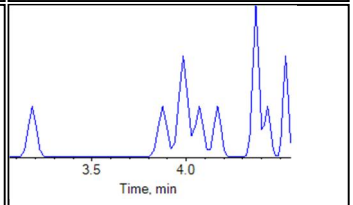
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NMeFOSAA_2

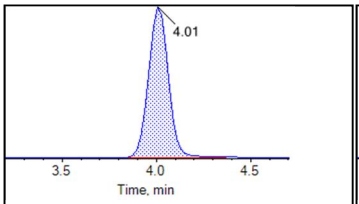


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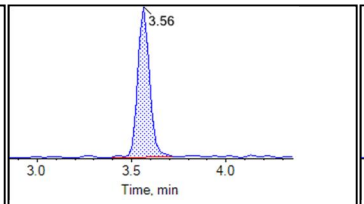


NEtFOSAA_2

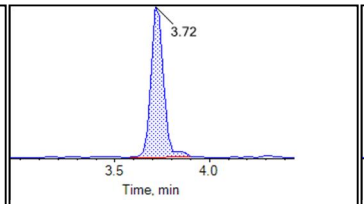
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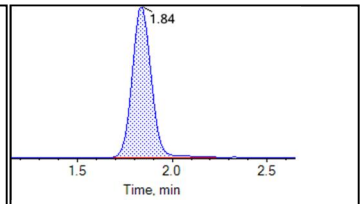
13C2-PFDoA



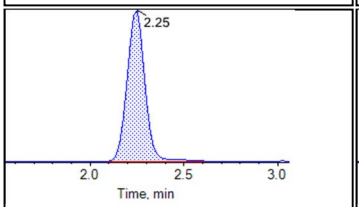
d3-MeFOSAA



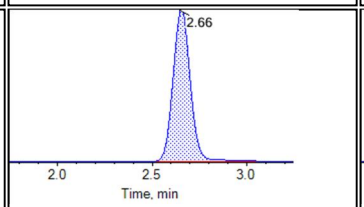
d5-EtFOSAA



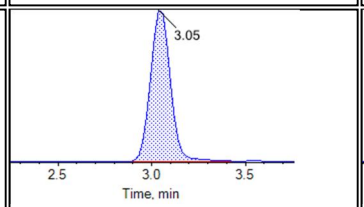
13C5-PFHxA



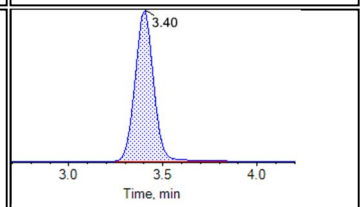
13C4-PFHpA



13C8-PFOA



13C9-PFNA

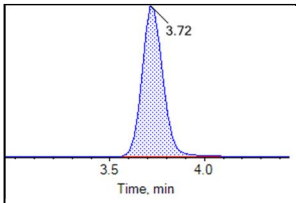


13C6-PFDA

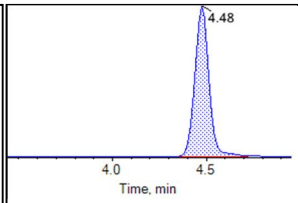
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Chromatogram Report

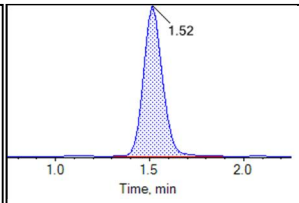
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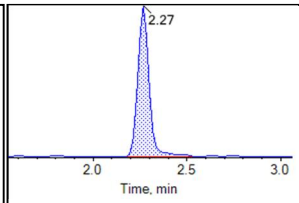
13C7-PFUnA



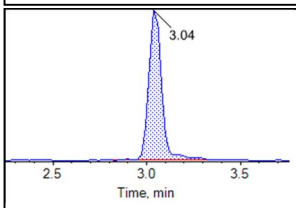
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

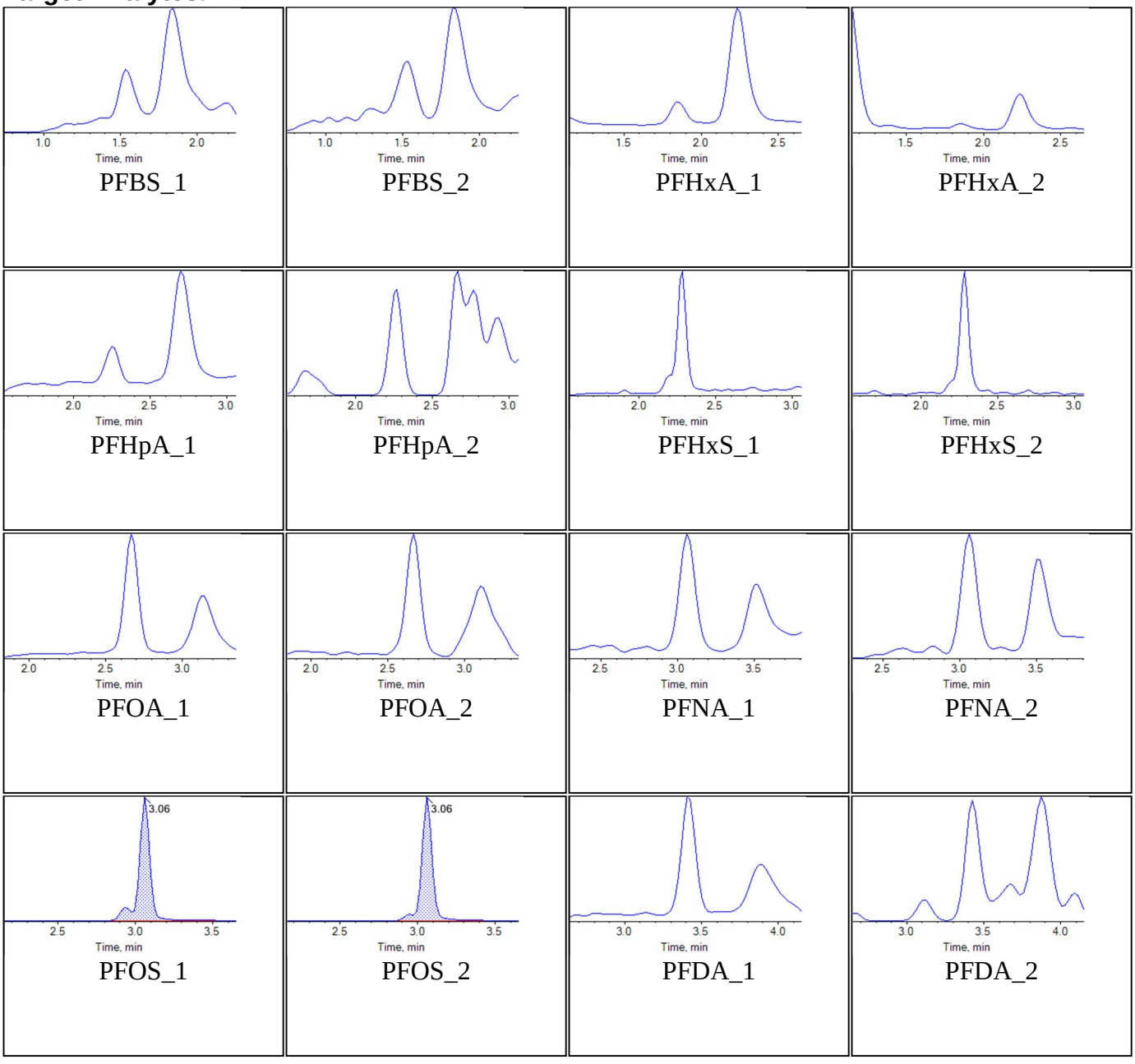
Chromatogram Report

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Printed: 09/10/2018 2:27:02 PM

Sample Name	J8364-FS-D(5)	**Injection Vial**	45
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:04:56	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

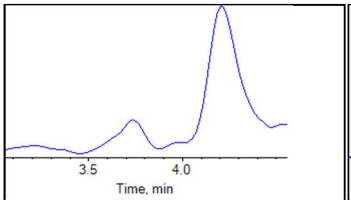
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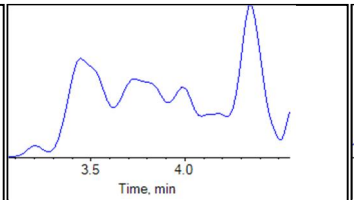
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Chromatogram Report

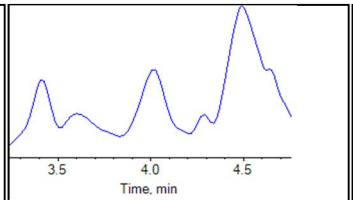
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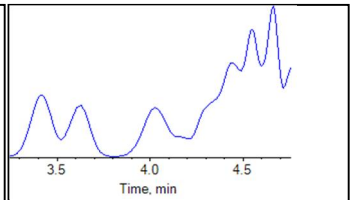
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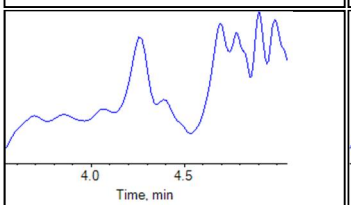
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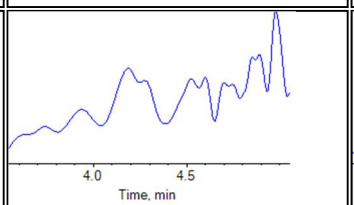
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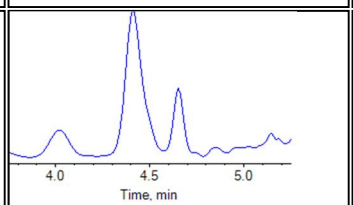
PFDoA_2



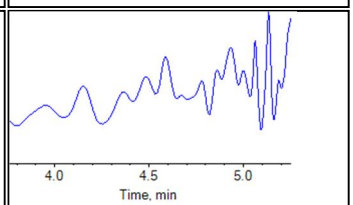
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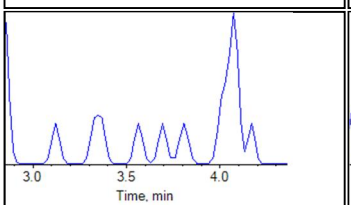
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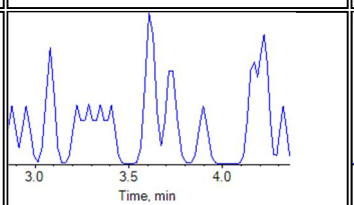
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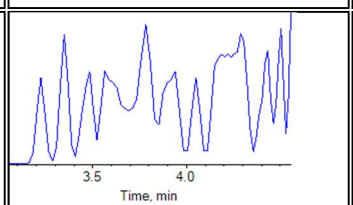
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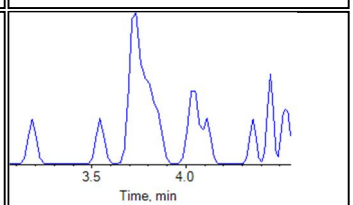
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NMeFOSAA_2

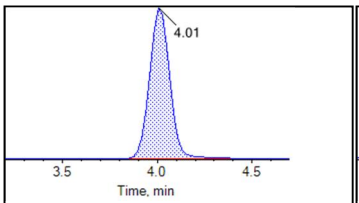


NEtFOSAA_1

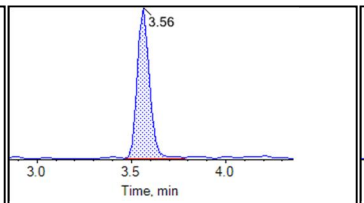


NEtFOSAA_2

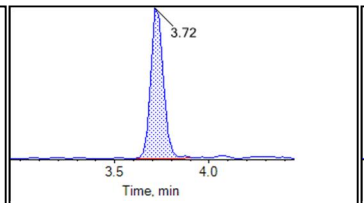
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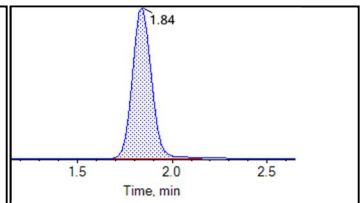
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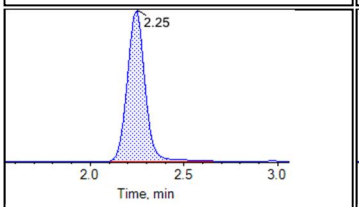
d3-MeFOSAA



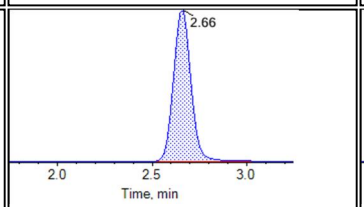
d5-EtFOSAA



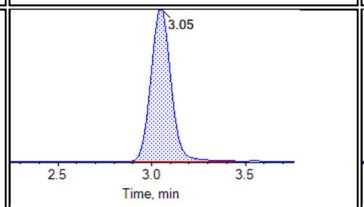
13C5-PFHxA



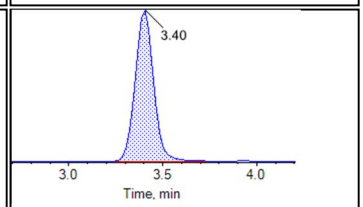
13C4-PFHpA



13C8-PFOA



13C9-PFNA

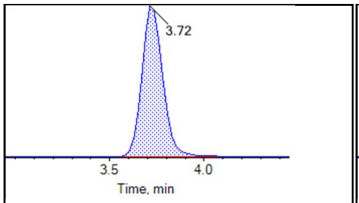


13C6-PFDA

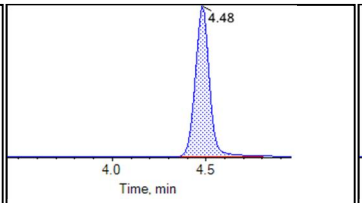
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Chromatogram Report

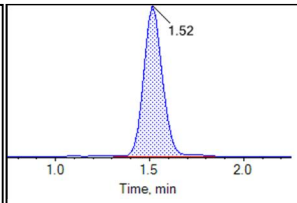
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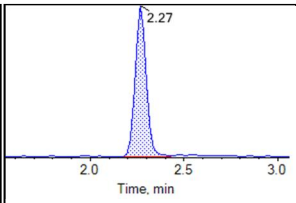
13C7-PFUnA



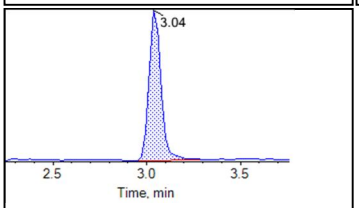
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

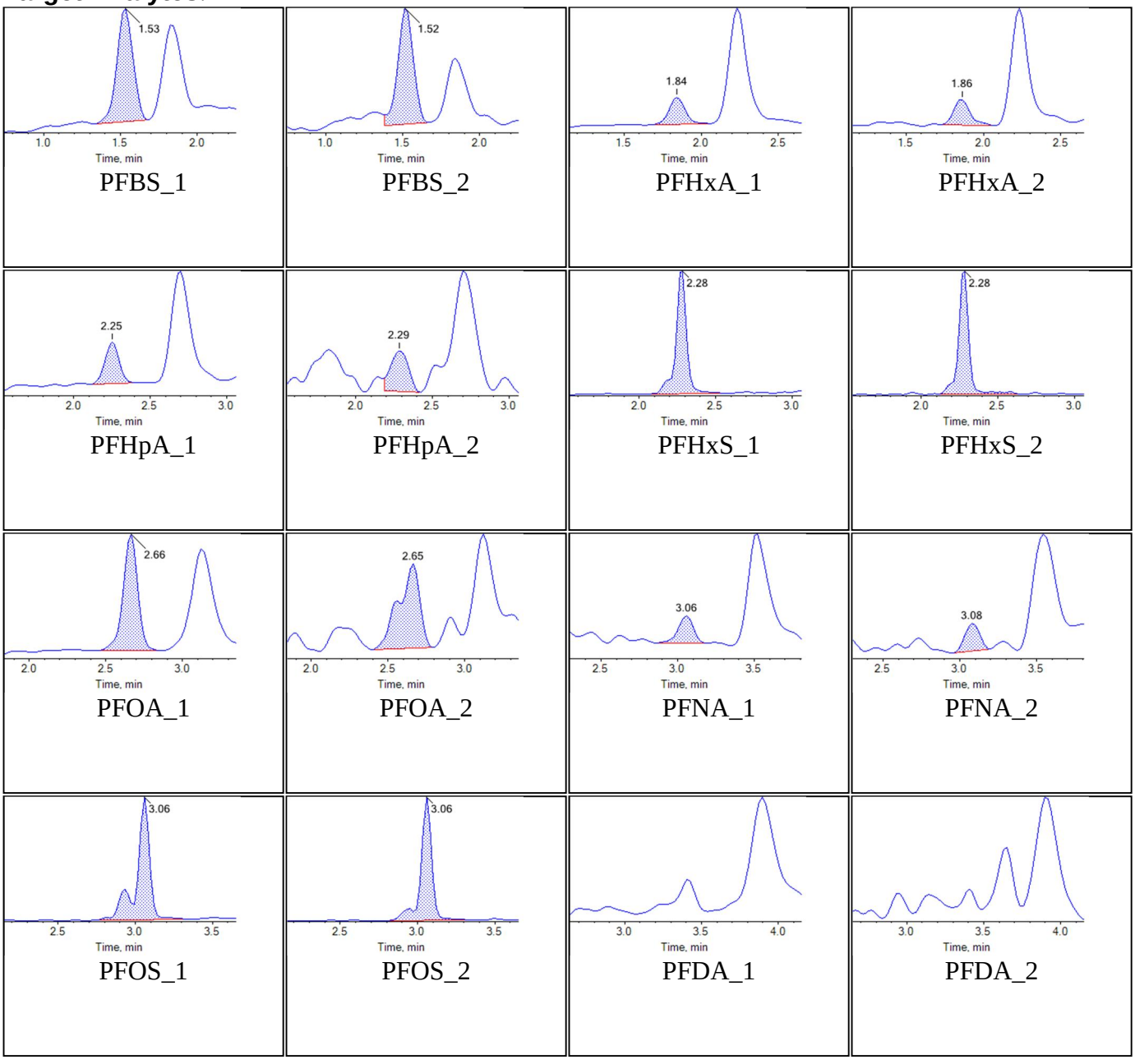
Chromatogram Report

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Sample Name	J8365-FS(3)	**Injection Vial**	46
Sample ID	VC-PM324-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:15:48	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

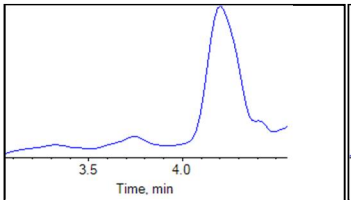
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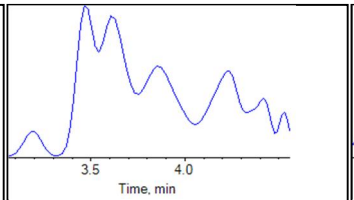
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Chromatogram Report

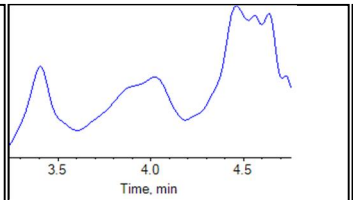
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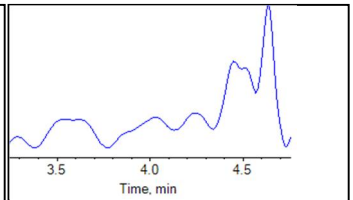
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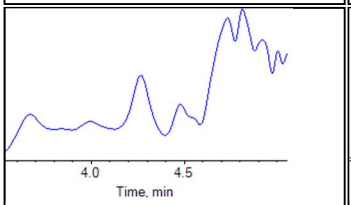
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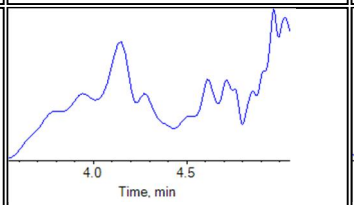
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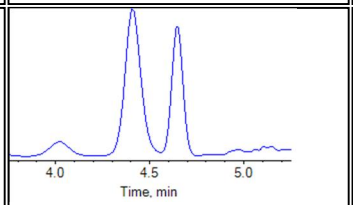
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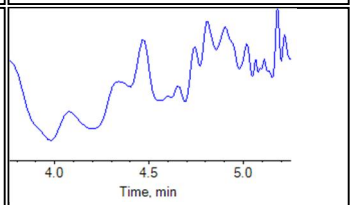
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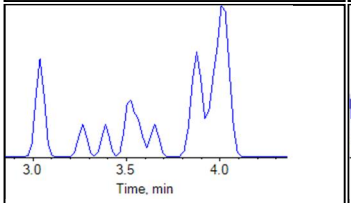
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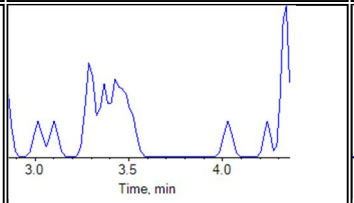
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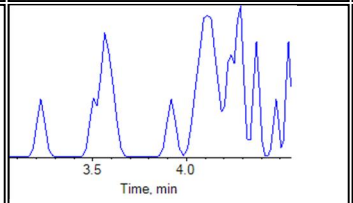
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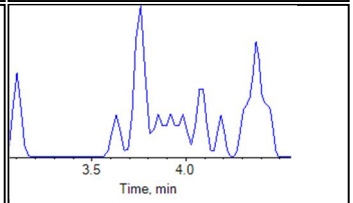
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NMeFOSAA_2

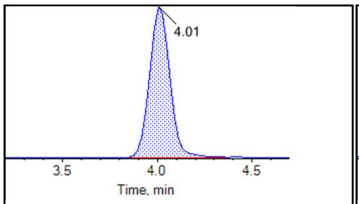


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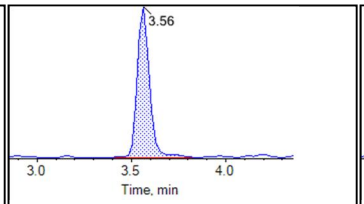


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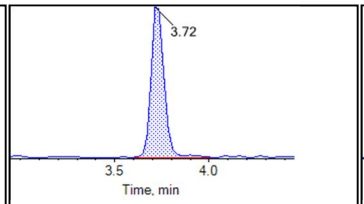
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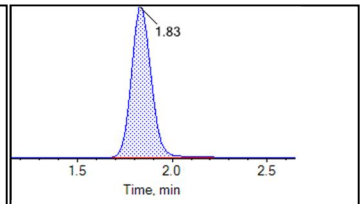
13C2-PFDoA



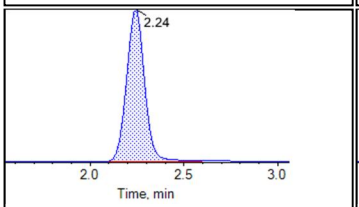
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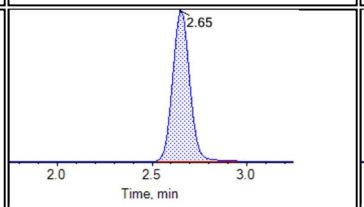
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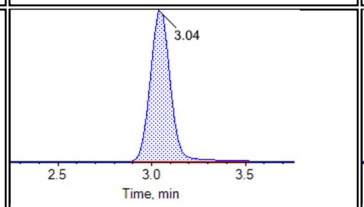
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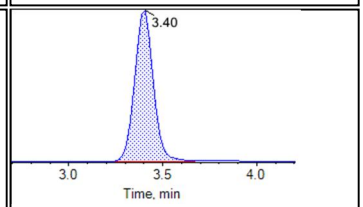
13C4-PFHpA



13C8-PFOA



13C9-PFNA

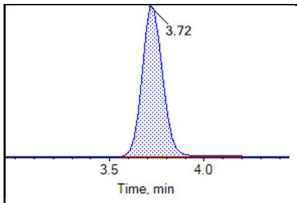


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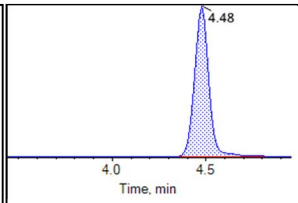
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Chromatogram Report

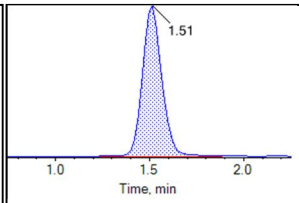
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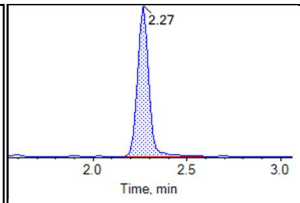
13C7-PFUnA



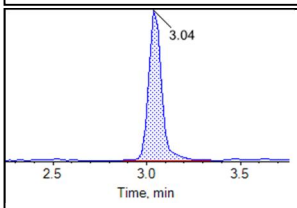
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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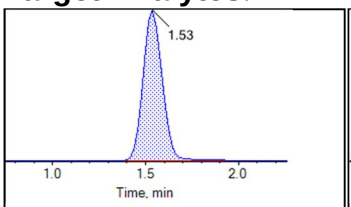
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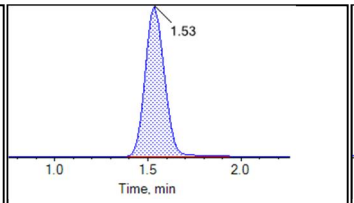
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Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:26:41	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

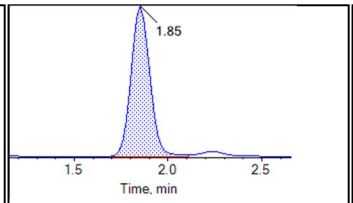
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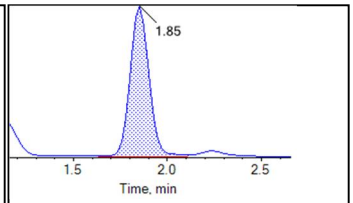
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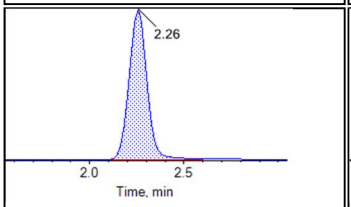
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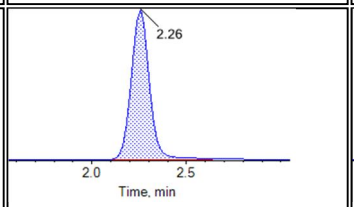
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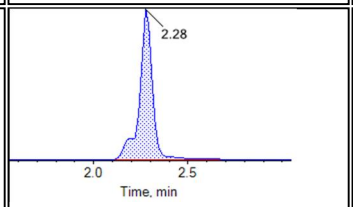
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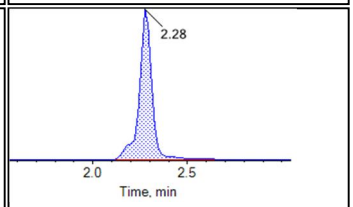
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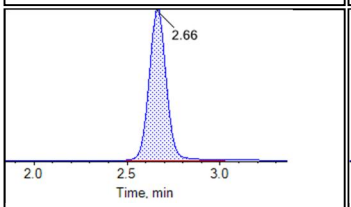
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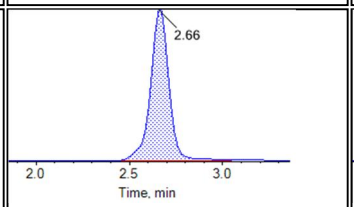
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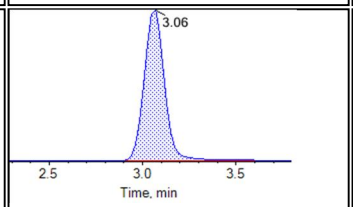
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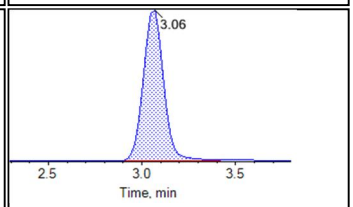
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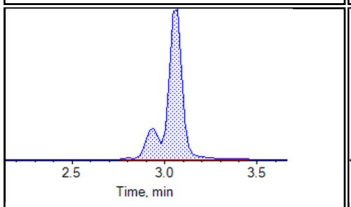
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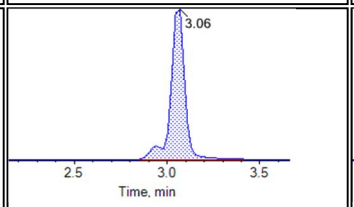
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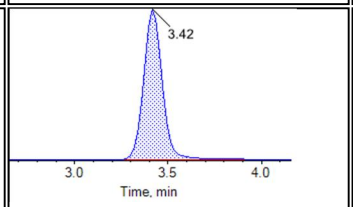
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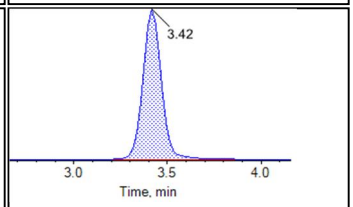
PFOS_1



PFOS_2



PFDA_1

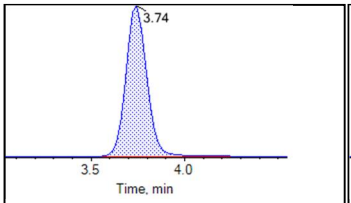


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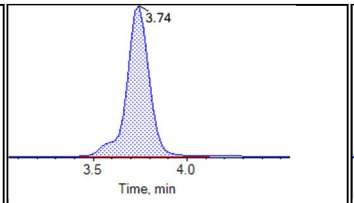
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Chromatogram Report

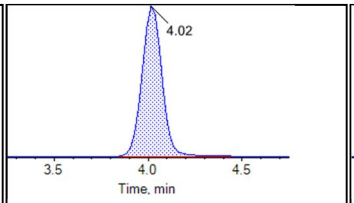
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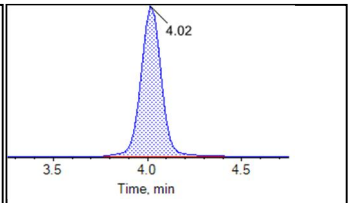
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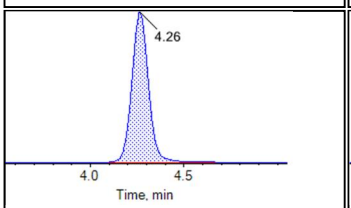
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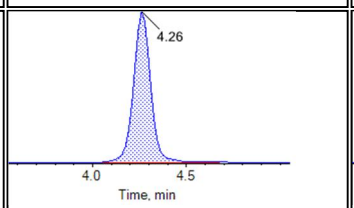
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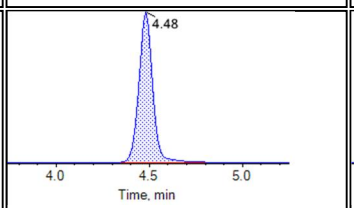
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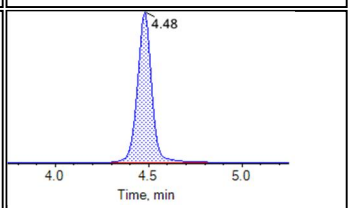
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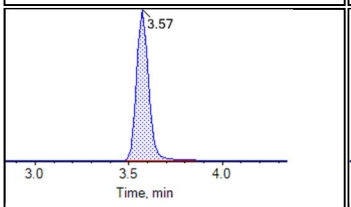
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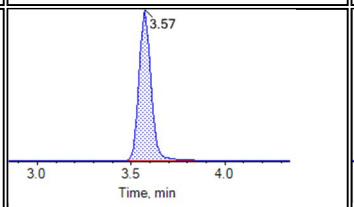
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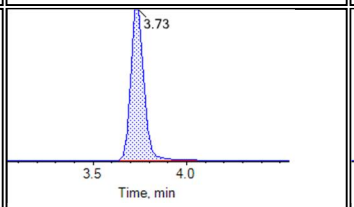
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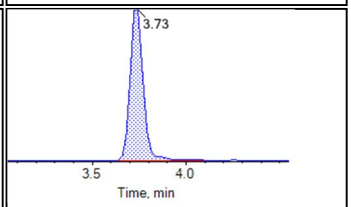
NMeFOSAA_1



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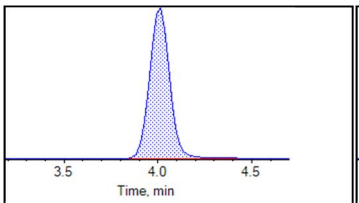


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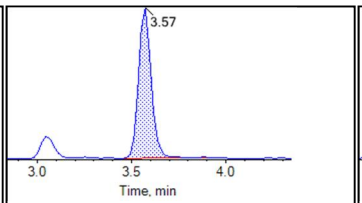


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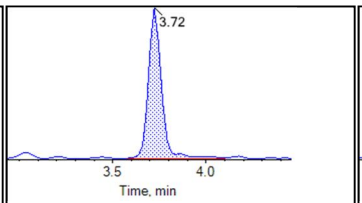
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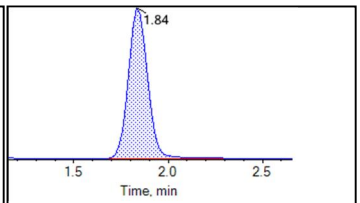
13C2-PFDoA



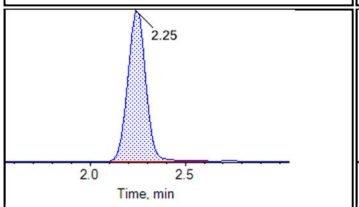
d3-MeFOSAA



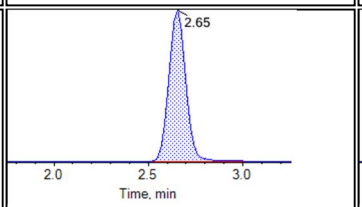
d5-EtFOSAA



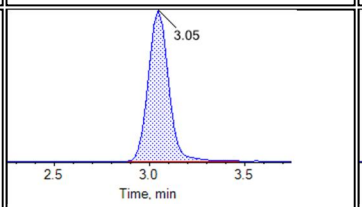
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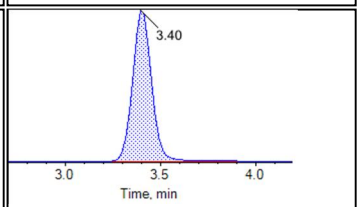
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13C8-PFOA



13C9-PFNA

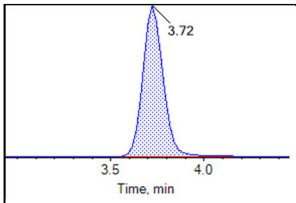


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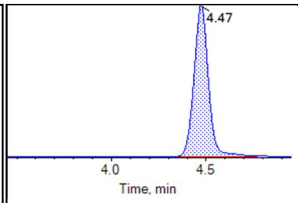
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Chromatogram Report

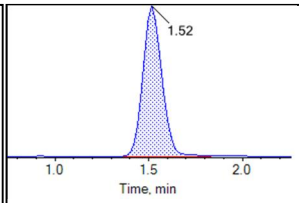
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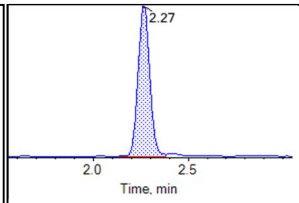
13C7-PFUnA



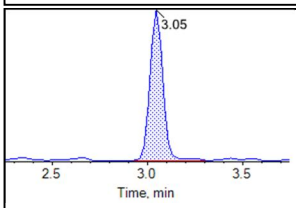
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

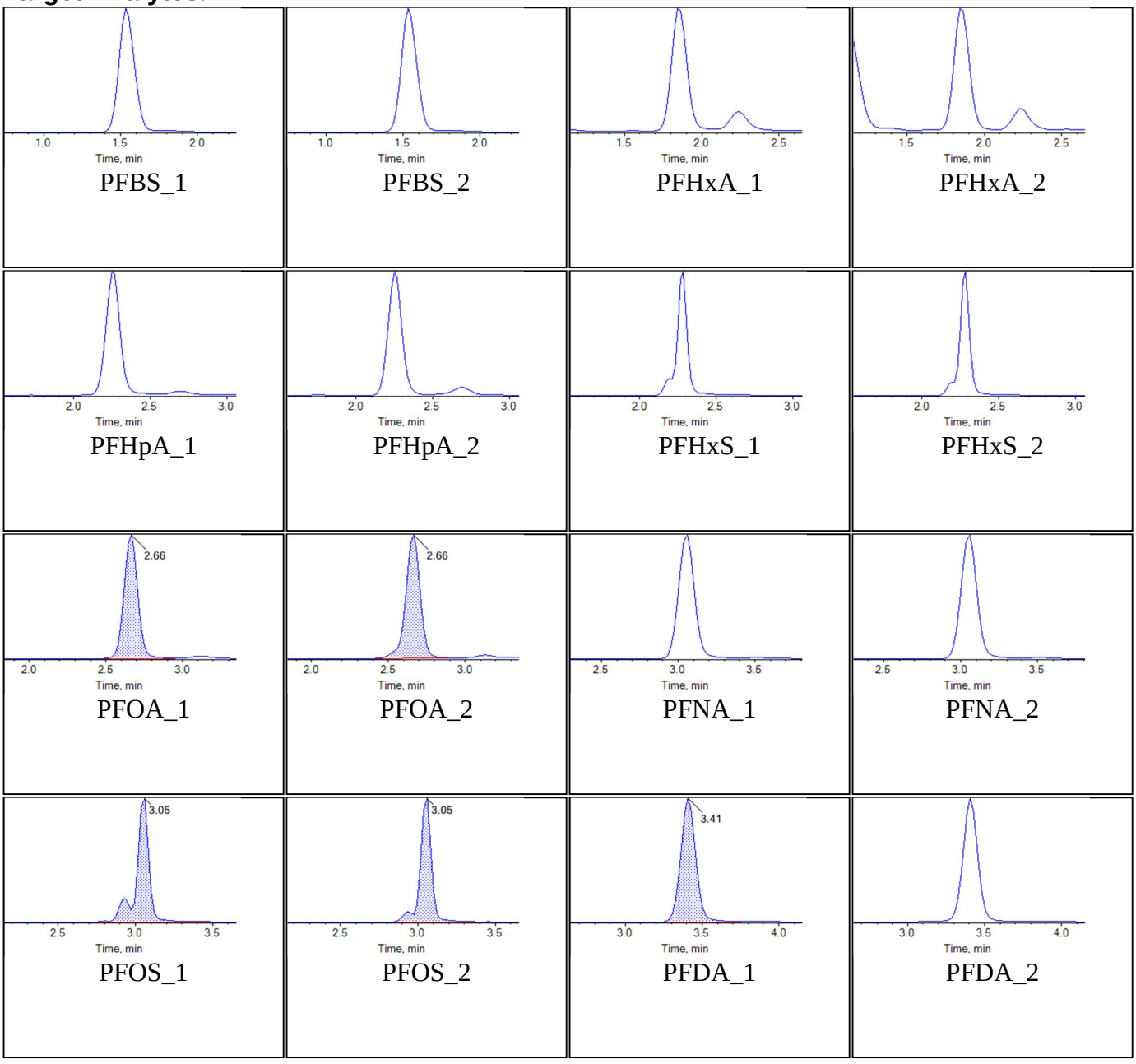
Chromatogram Report

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Printed: 09/10/2018 2:27:21 PM

Sample Name	J8366MS-FS-D(5)	**Injection Vial**	48
Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:37:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

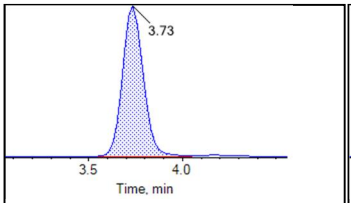
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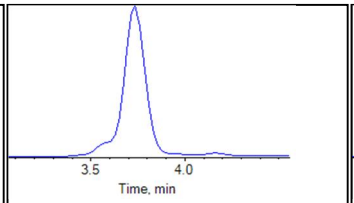
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Chromatogram Report

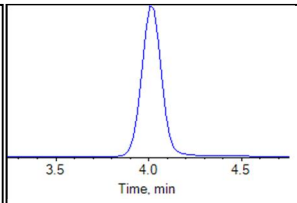
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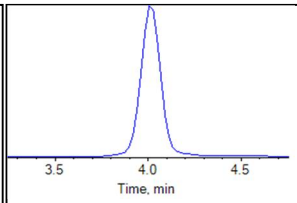
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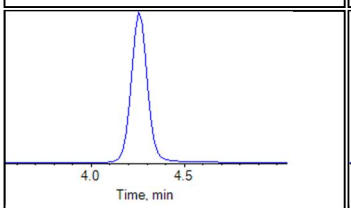
PFUnA_2



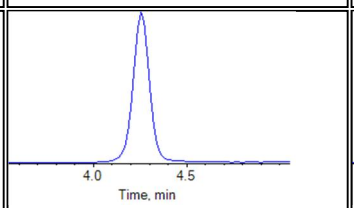
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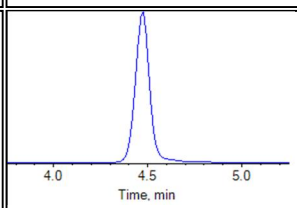
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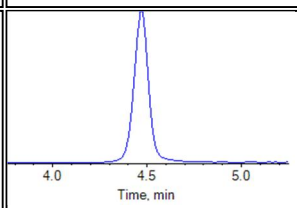
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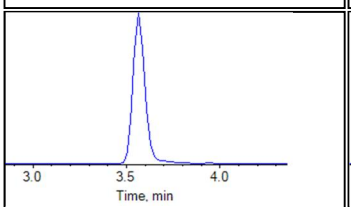
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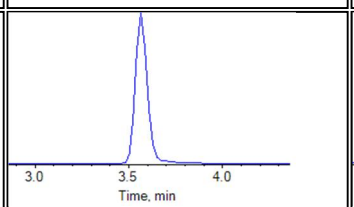
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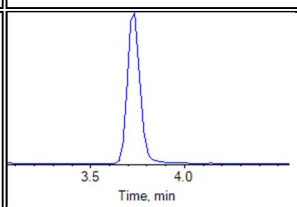
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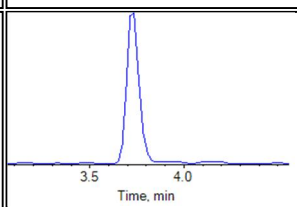
NMeFOSAA_1



NMeFOSAA_2

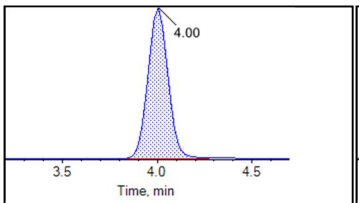


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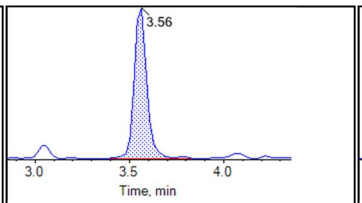


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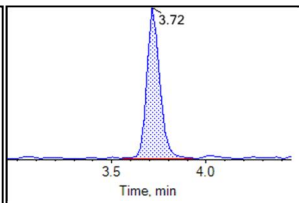
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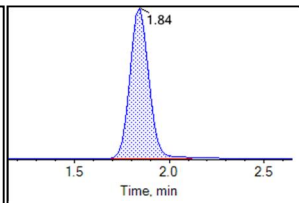
13C2-PFDoA



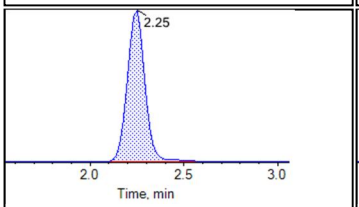
d3-MeFOSAA



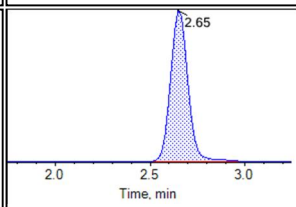
d5-EtFOSAA



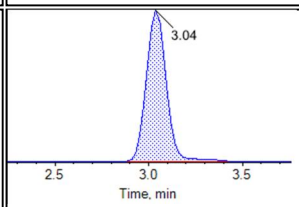
13C5-PFHxA



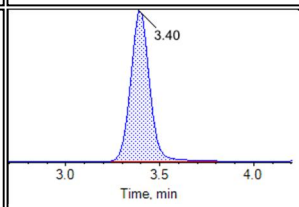
13C4-PFHpA



13C8-PFOA



13C9-PFNA

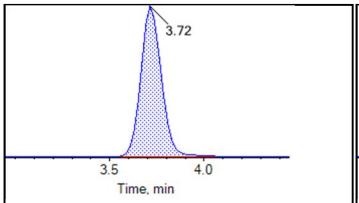


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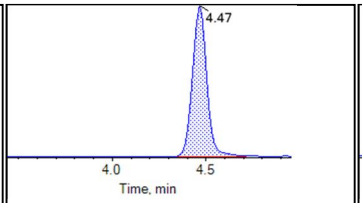
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Chromatogram Report

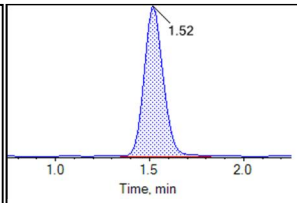
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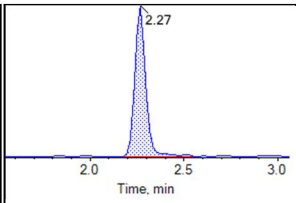
13C7-PFUnA



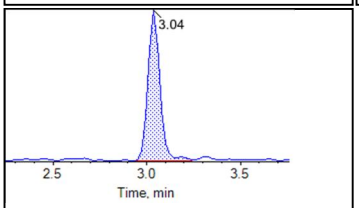
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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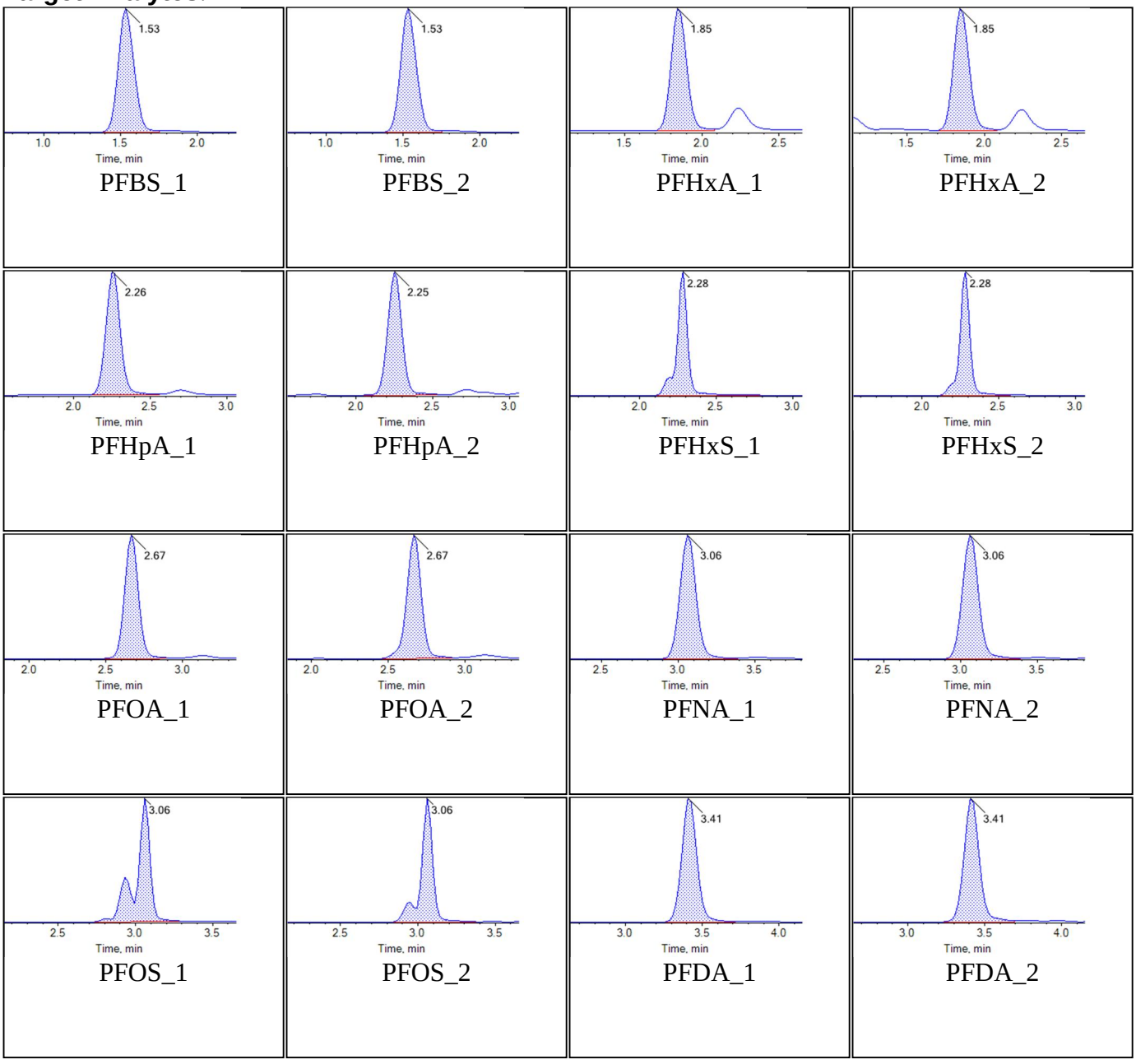
Chromatogram Report

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Sample Name	KB77 CCV	**Injection Vial**	49
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

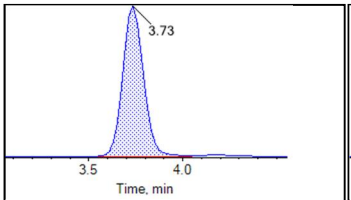
Target Analytes:



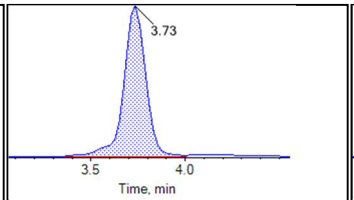
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Chromatogram Report

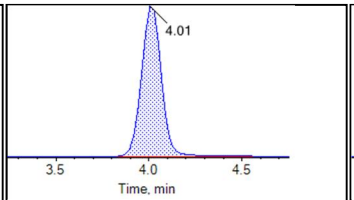
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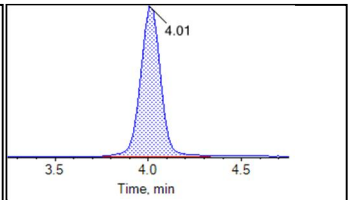
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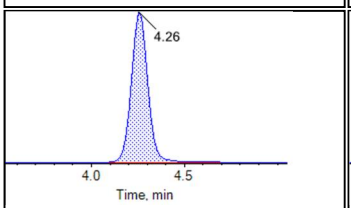
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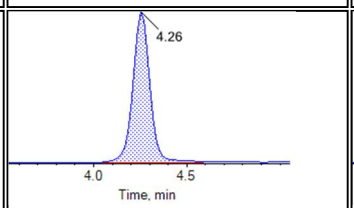
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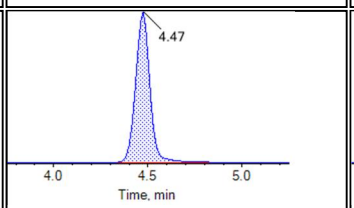
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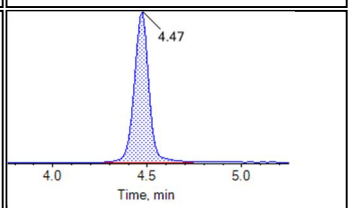
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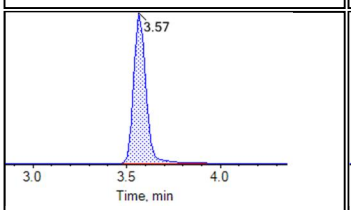
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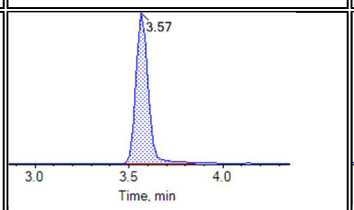
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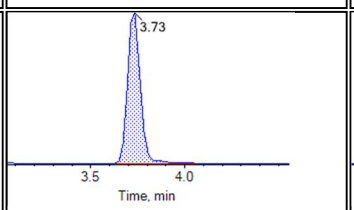
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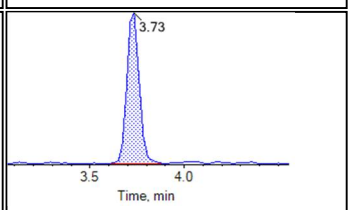
NMeFOSAA_1



NMeFOSAA_2

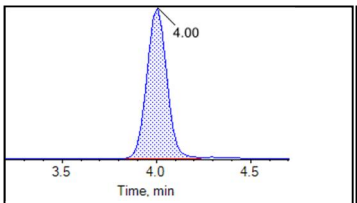


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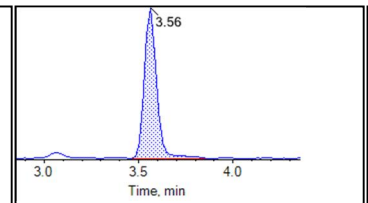


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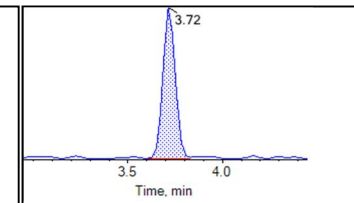
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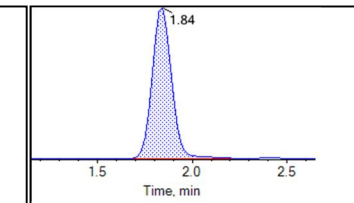
13C2-PFDoA



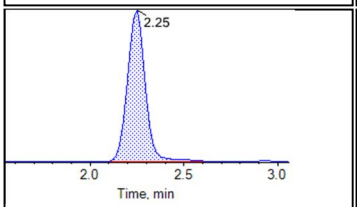
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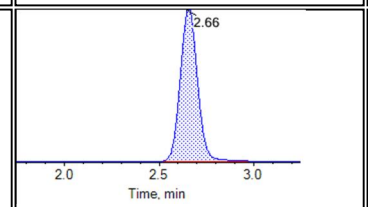
d5-EtFOSAA



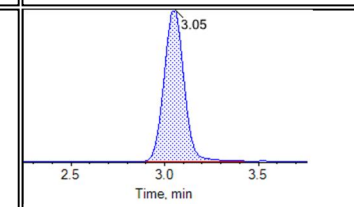
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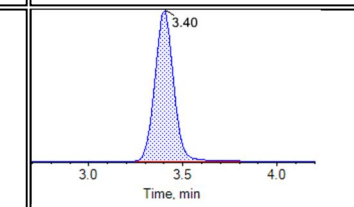
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13C8-PFOA



13C9-PFNA

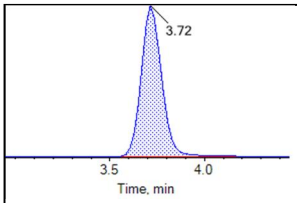


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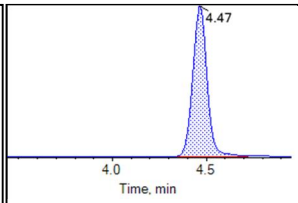
BATTELLE

Chromatogram Report

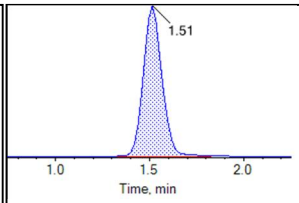
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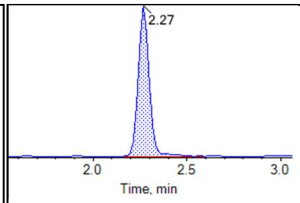
13C7-PFUnA



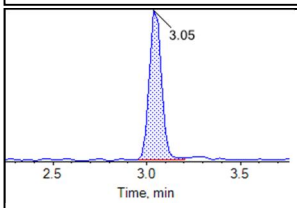
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

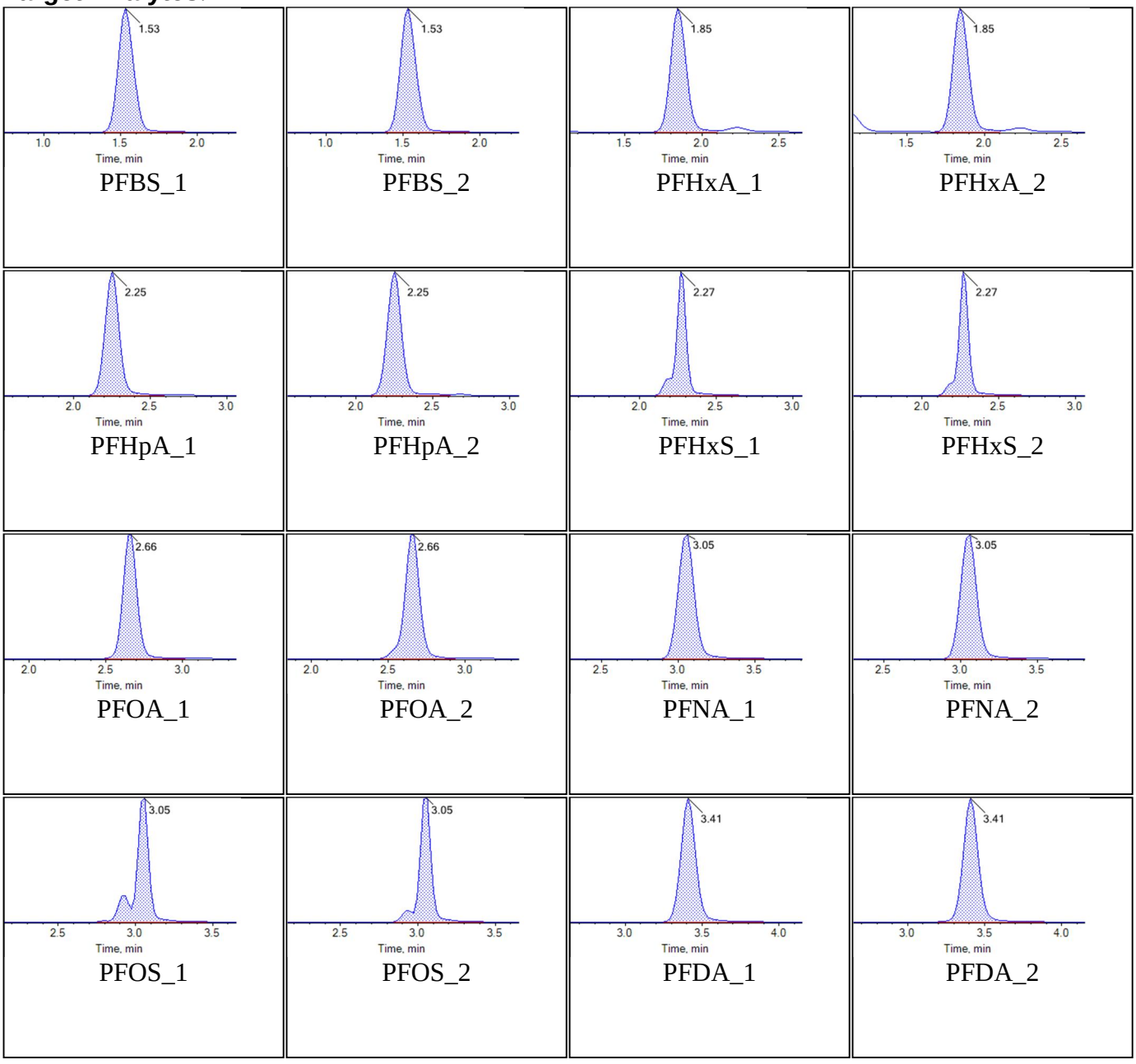
Chromatogram Report

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Sample Name	J8367MSD-FS(3)	**Injection Vial**	51
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:10:07	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

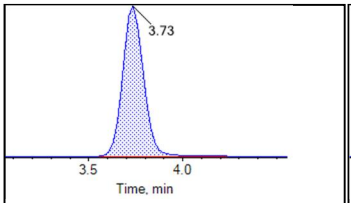
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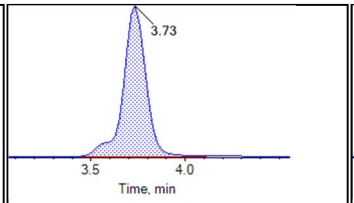
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Chromatogram Report

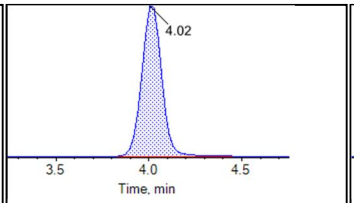
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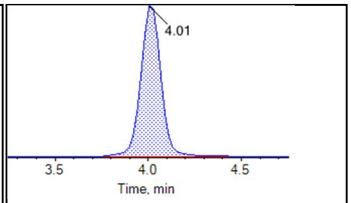
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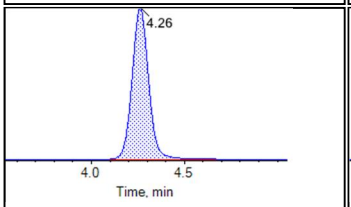
PFUnA_2



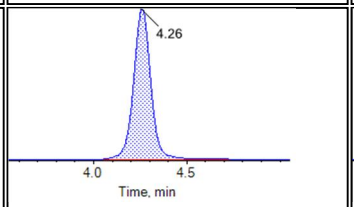
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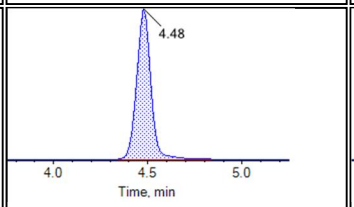
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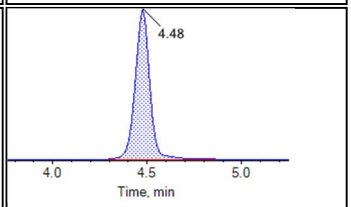
PFTrDA_1



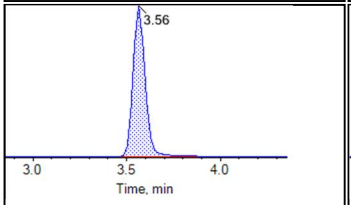
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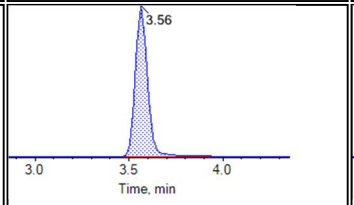
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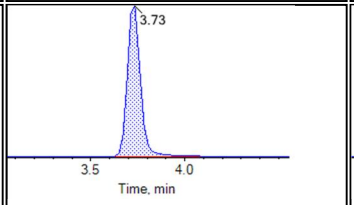
PFTeDA_2



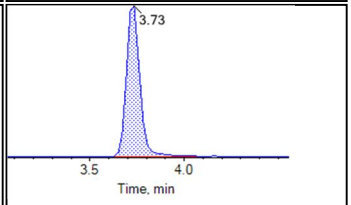
NMeFOSAA_1



NMeFOSAA_2

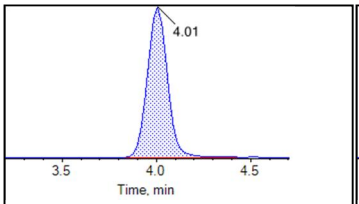


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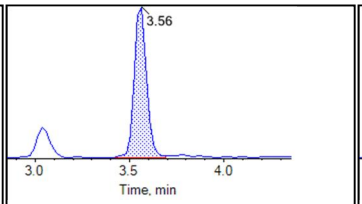


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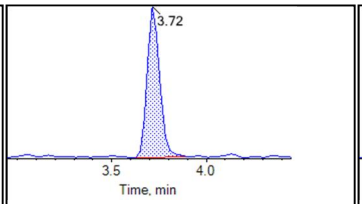
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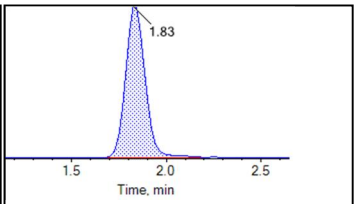
13C2-PFDoA



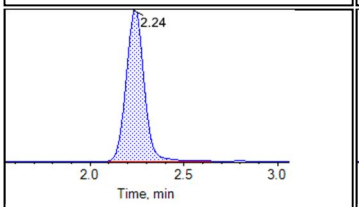
d3-MeFOSAA



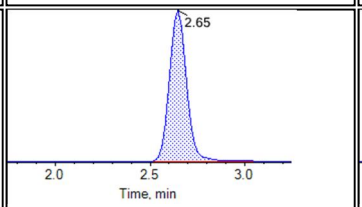
d5-EtFOSAA



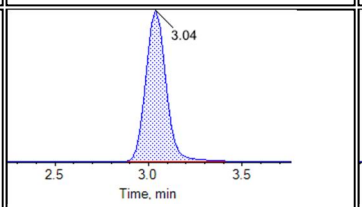
13C5-PFHxA



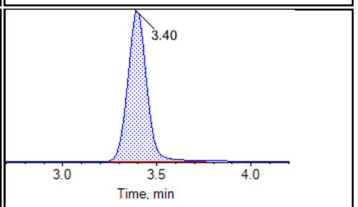
13C4-PFHpA



13C8-PFOA



13C9-PFNA

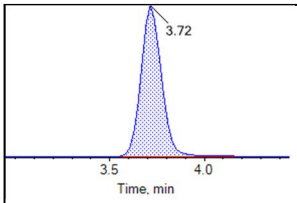


13C6-PFDA

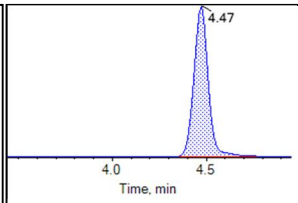
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Chromatogram Report

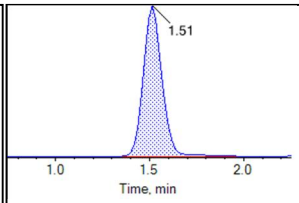
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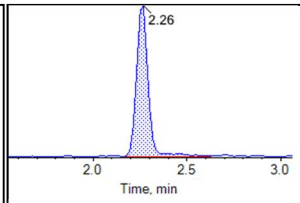
13C7-PFUnA



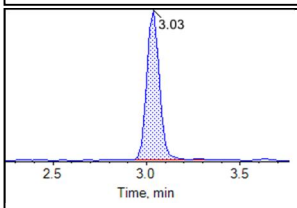
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

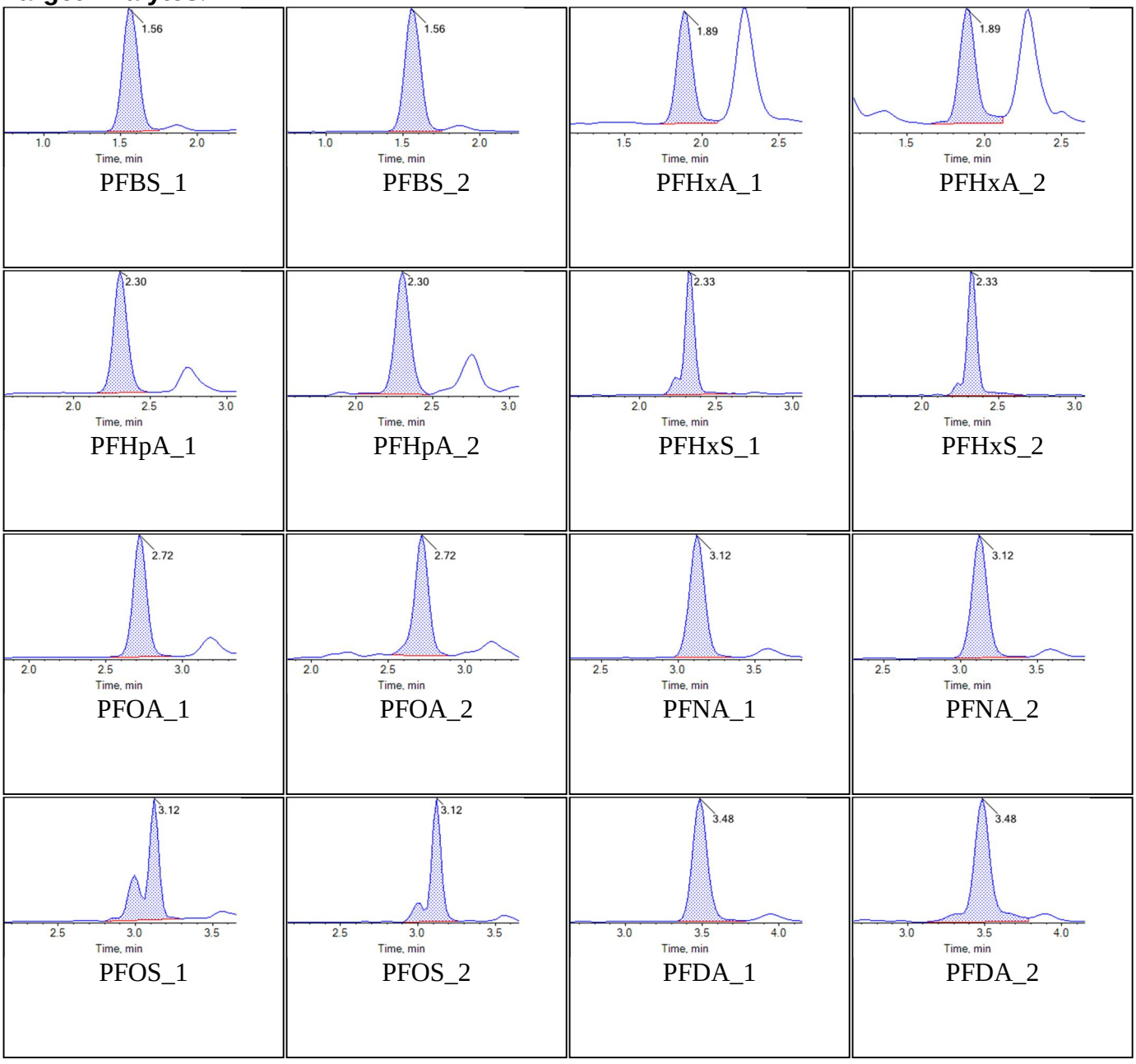
Chromatogram Report

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Sample Name	KB75	**Injection Vial**	4
Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:01:53	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

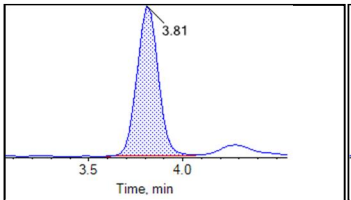
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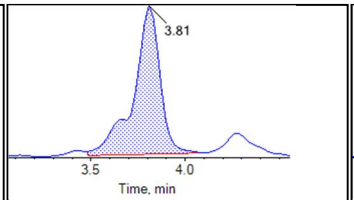
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Chromatogram Report

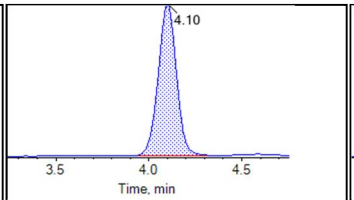
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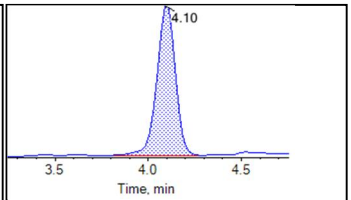
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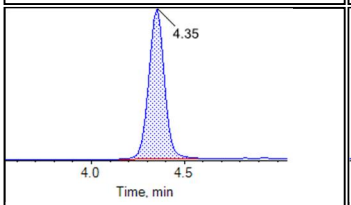
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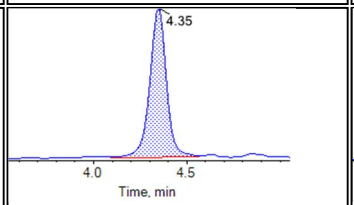
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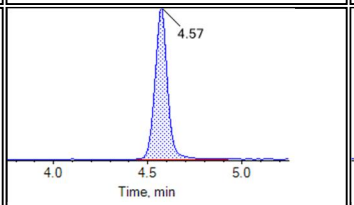
PFDoA_2



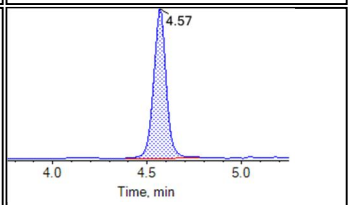
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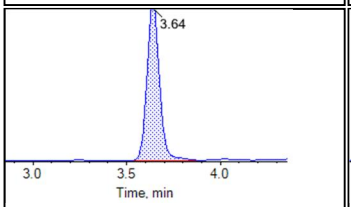
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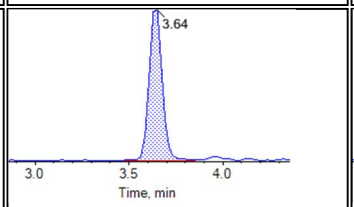
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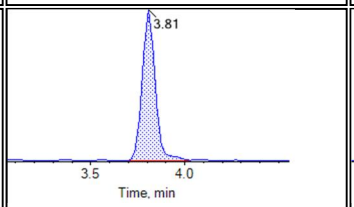
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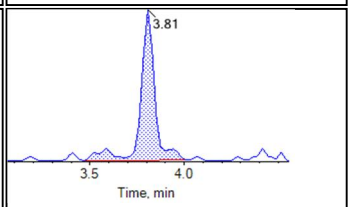
NMeFOSAA_1



NMeFOSAA_2

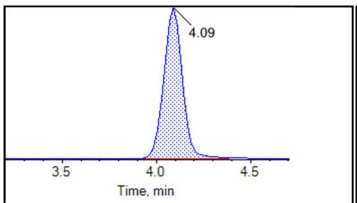


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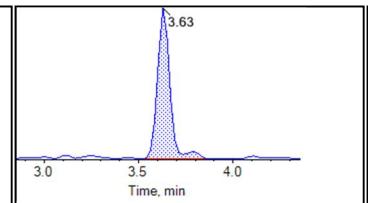


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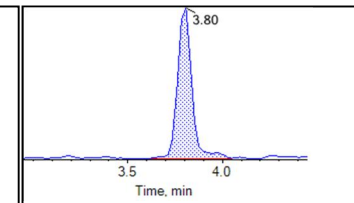
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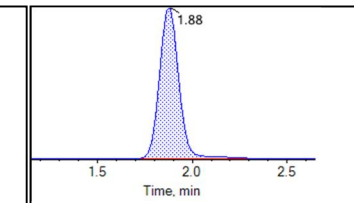
13C2-PFDoA



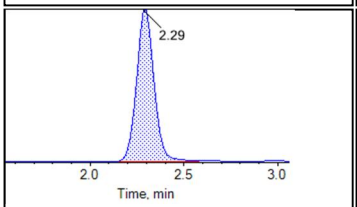
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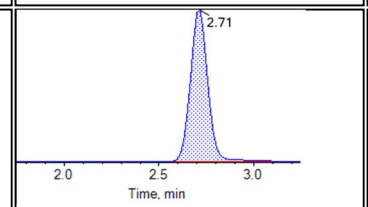
d5-EtFOSAA



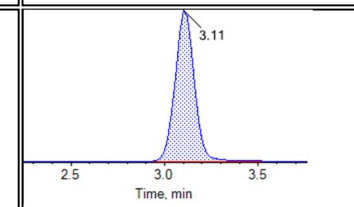
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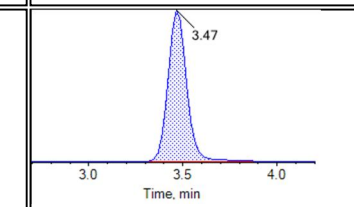
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13C8-PFOA



13C9-PFNA

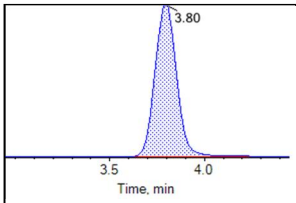


13C6-PFDA

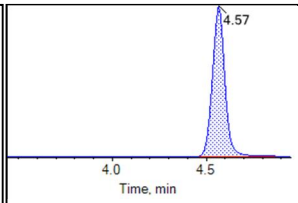
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Chromatogram Report

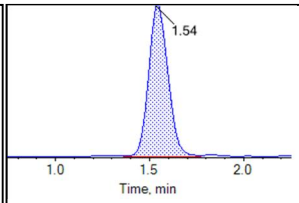
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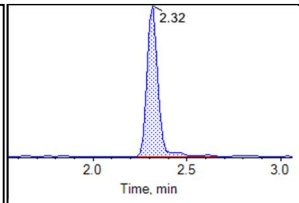
13C7-PFUnA



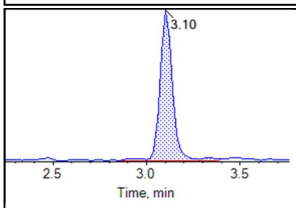
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

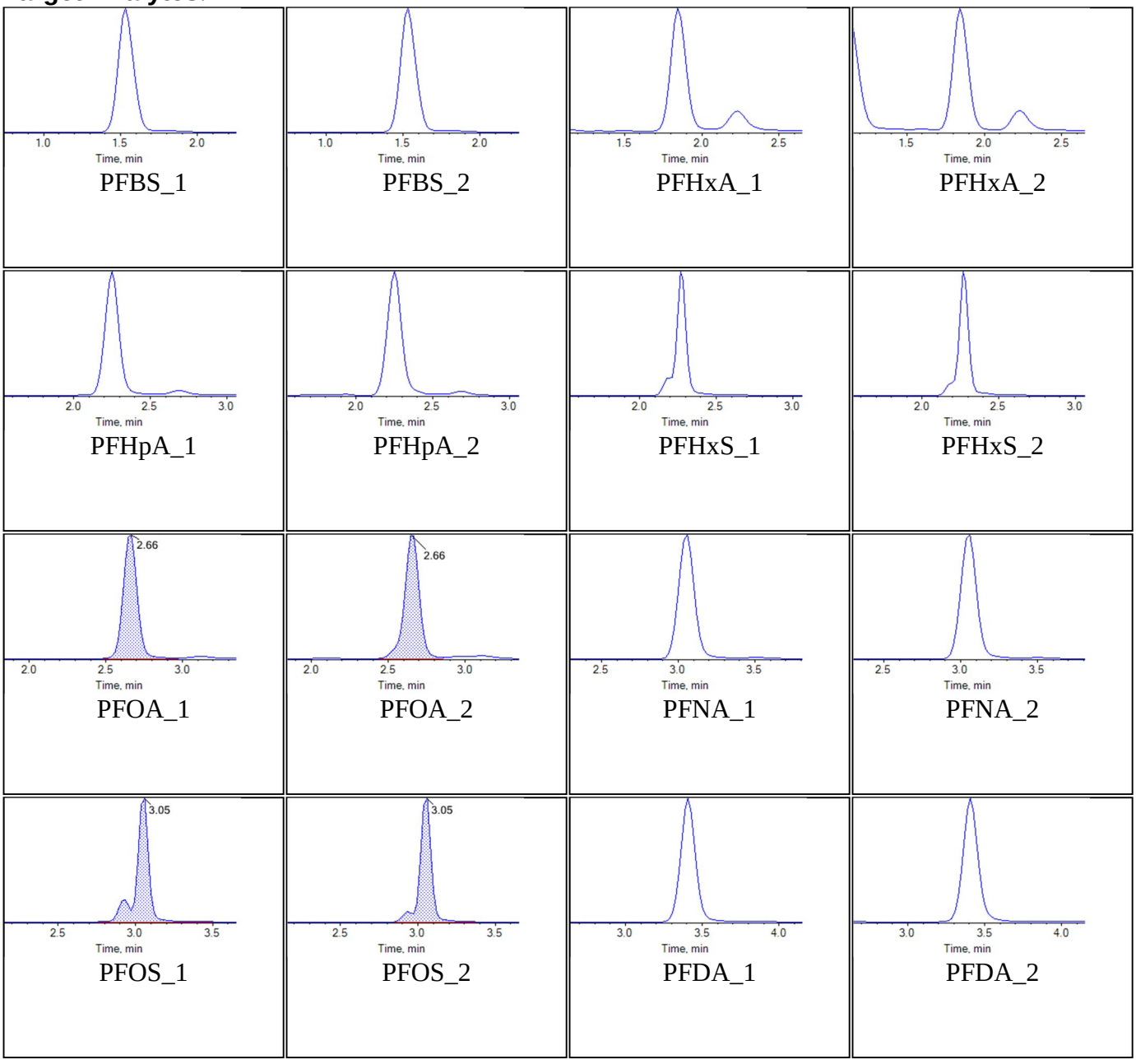
Chromatogram Report

Created with Analyst Reporter
Printed: 09/10/2018 2:27:45 PM

Sample Name	J8367MSD-FS-D(5)	**Injection Vial**	52
Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:20:59	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

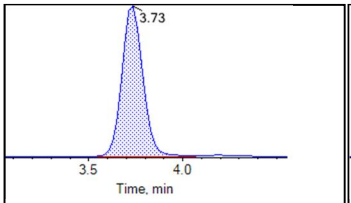
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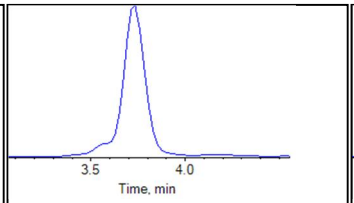
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Chromatogram Report

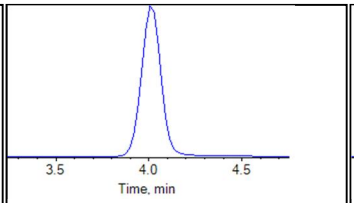
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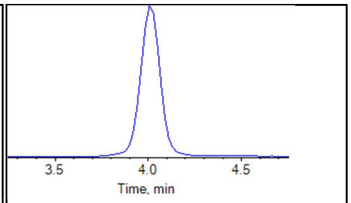
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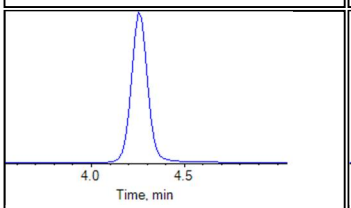
PFUnA_2



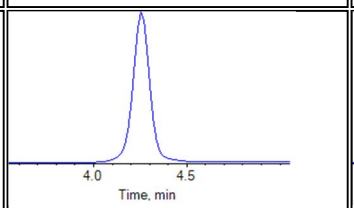
PFDoA_1



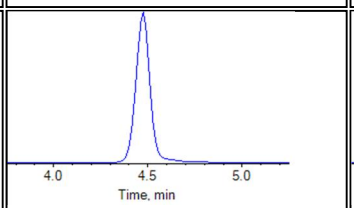
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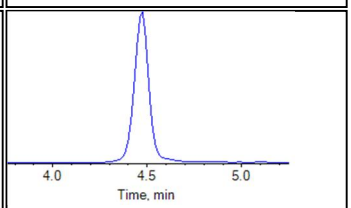
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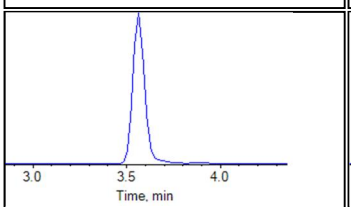
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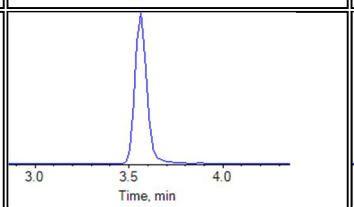
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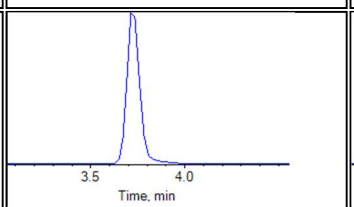
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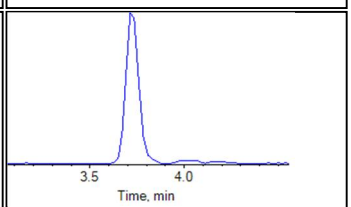
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NMeFOSAA_2

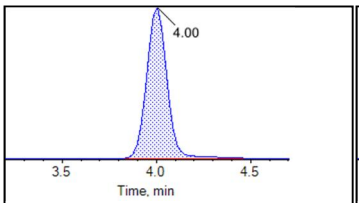


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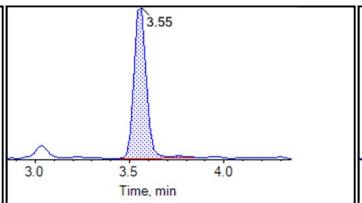


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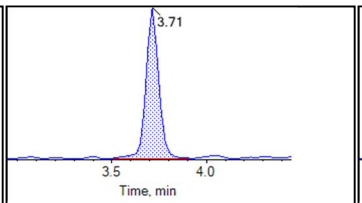
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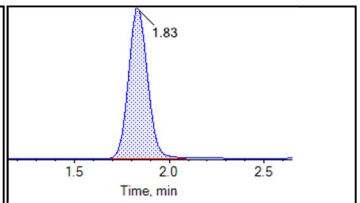
13C2-PFDoA



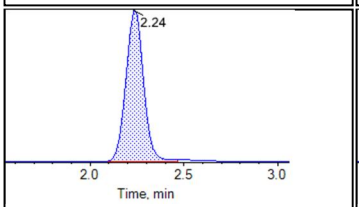
d3-MeFOSAA



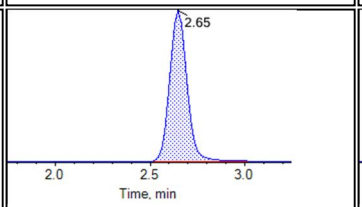
d5-EtFOSAA



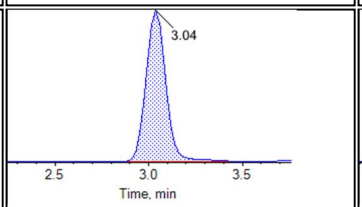
13C5-PFHxA



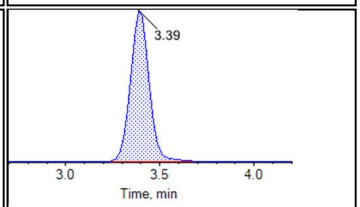
13C4-PFHpA



13C8-PFOA



13C9-PFNA

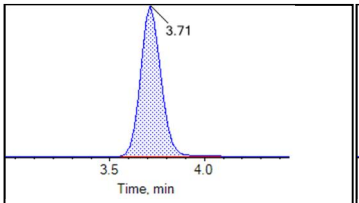


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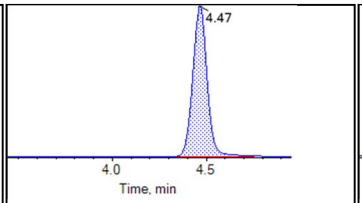
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Chromatogram Report

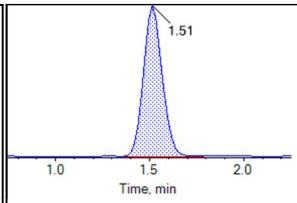
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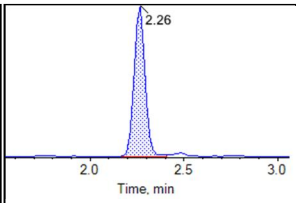
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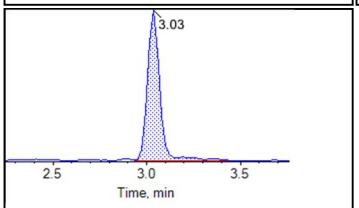
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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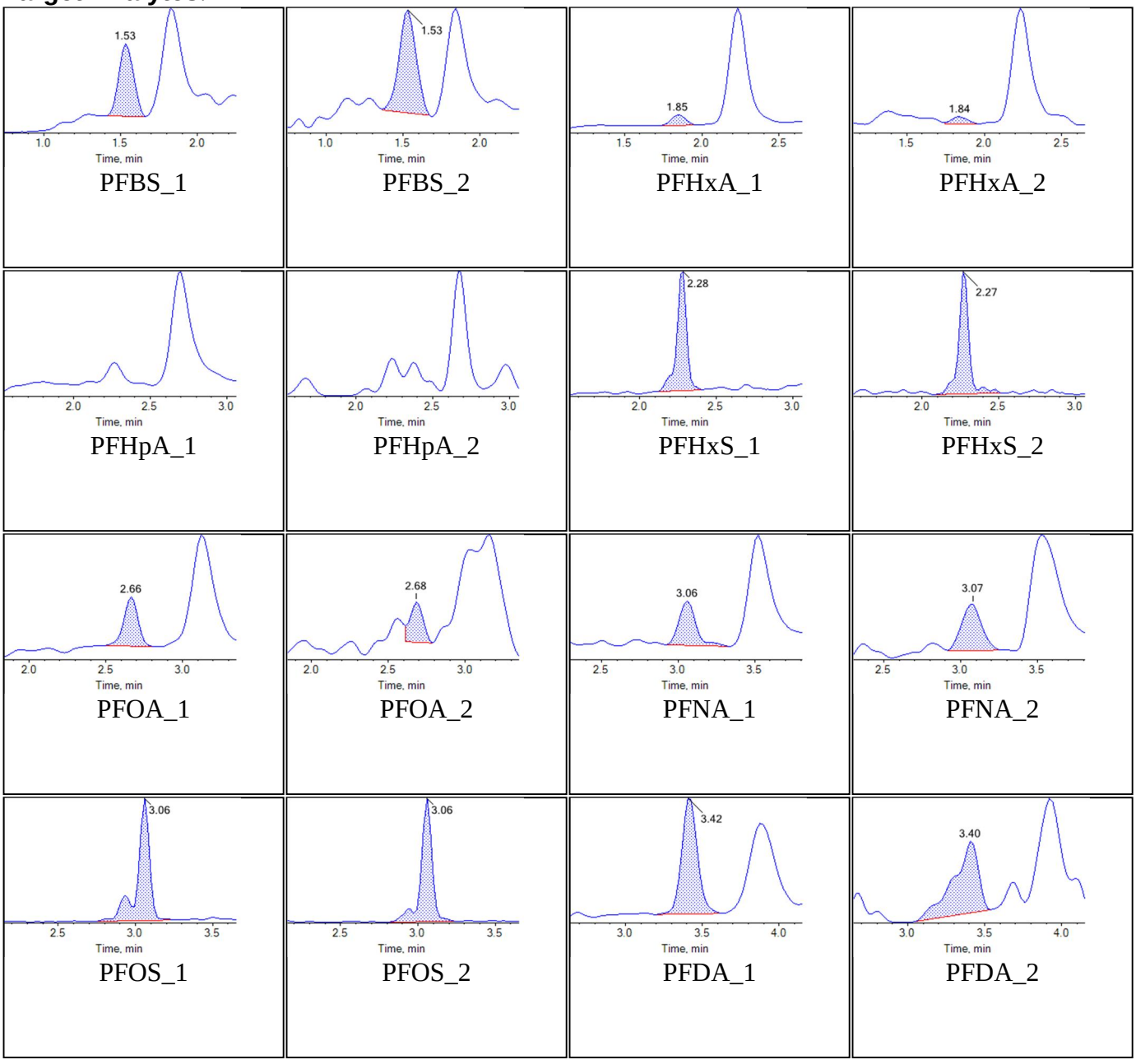
Chromatogram Report

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Sample Name	J8373-FS(3)	**Injection Vial**	53
Sample ID	VC-PM64B-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:31:50	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

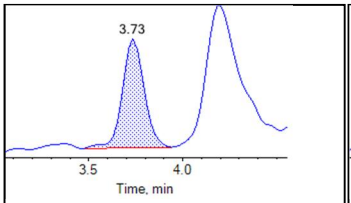
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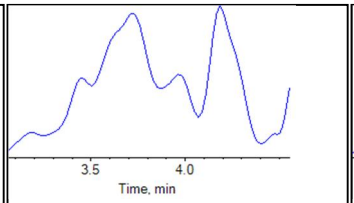
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Chromatogram Report

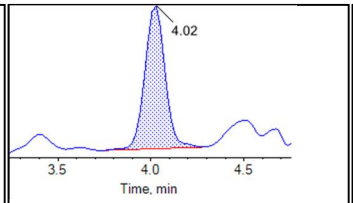
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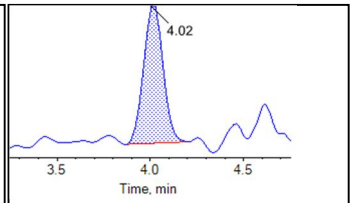
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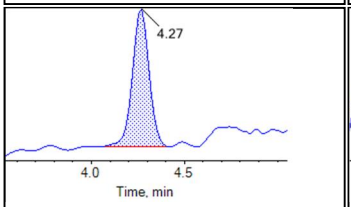
PFUnA_2



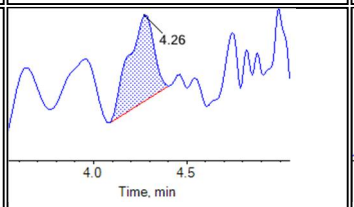
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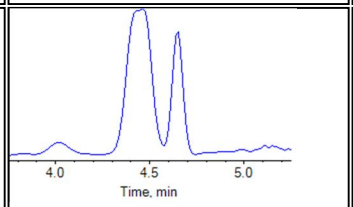
PFDoA_2



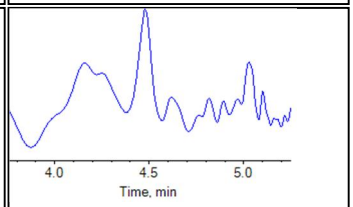
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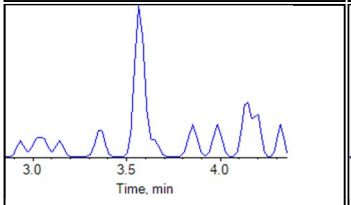
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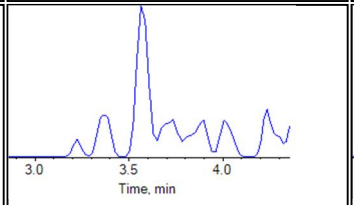
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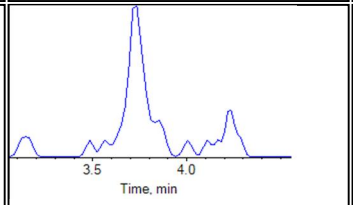
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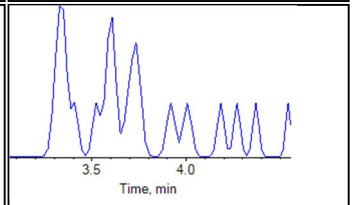
NMeFOSAA_1



NMeFOSAA_2

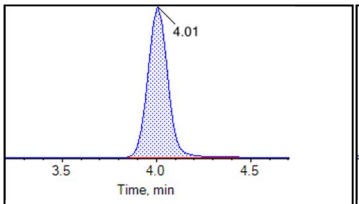


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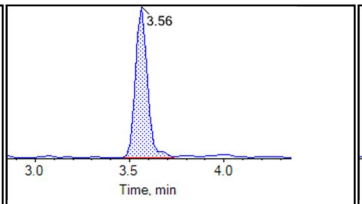


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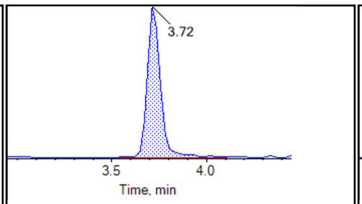
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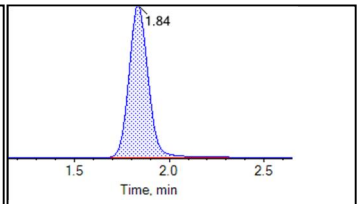
13C2-PFDoA



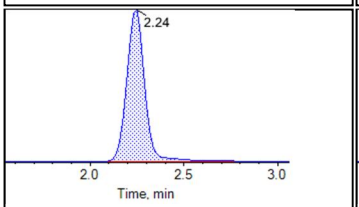
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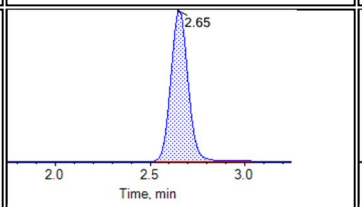
d5-EtFOSAA



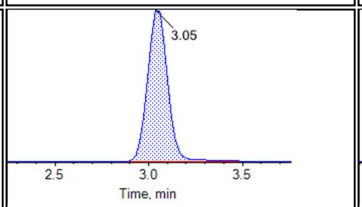
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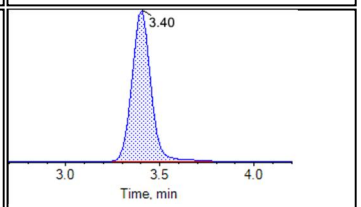
13C4-PFHpA



13C8-PFOA



13C9-PFNA

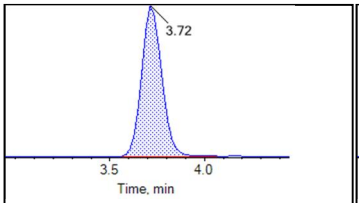


13C6-PFDA

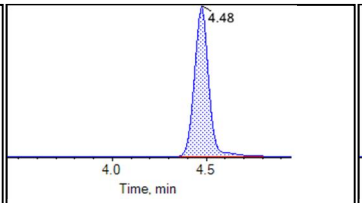
BATTELLE

Chromatogram Report

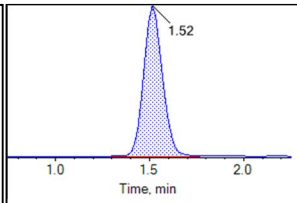
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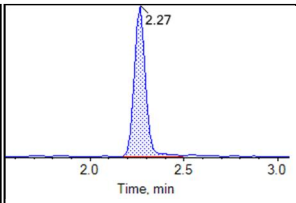
13C7-PFUnA



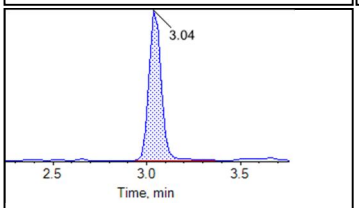
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

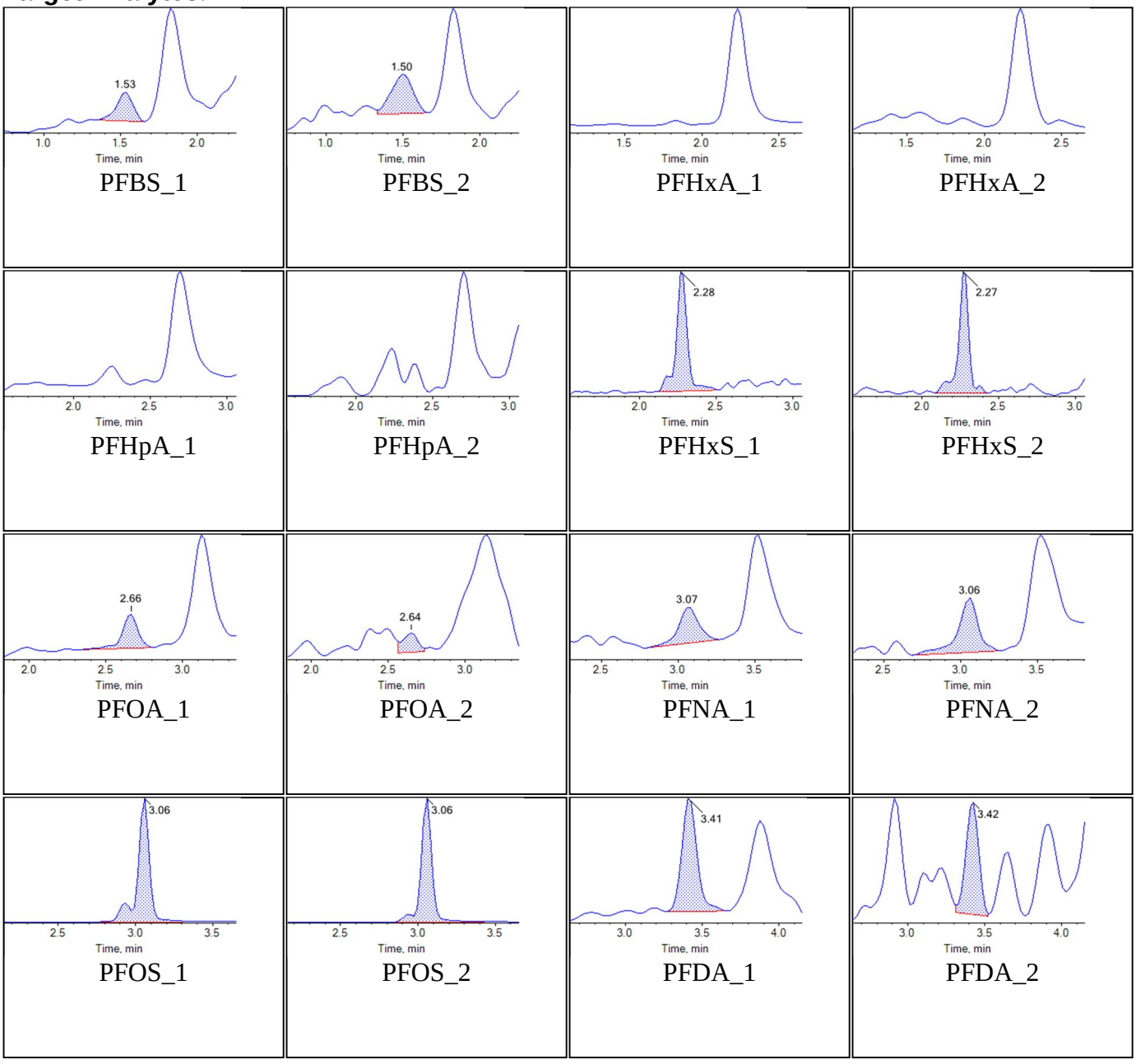
Chromatogram Report

Created with Analyst Reporter
Printed: 09/10/2018 2:27:54 PM

Sample Name	J8374-FS(3)	**Injection Vial**	54
Sample ID	VC-PM64B-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:42:42	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

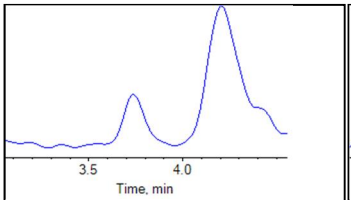
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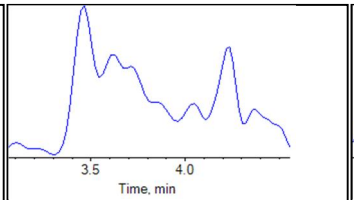
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Chromatogram Report

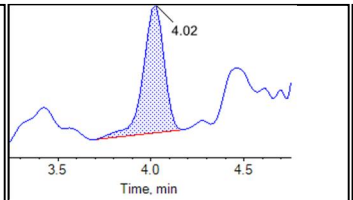
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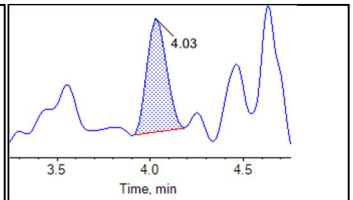
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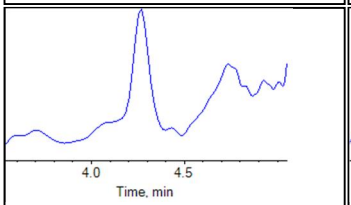
PFUnA_2



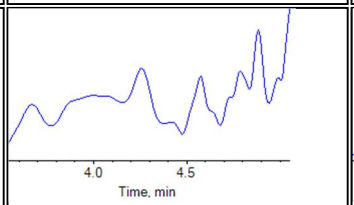
PFDoA_1



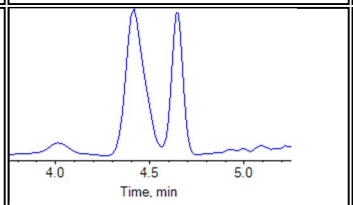
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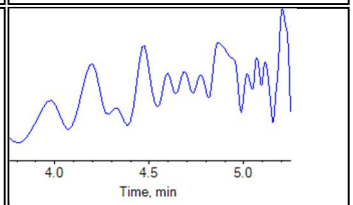
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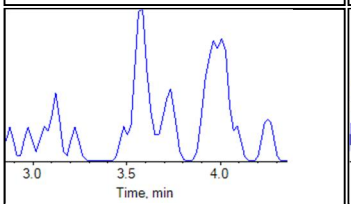
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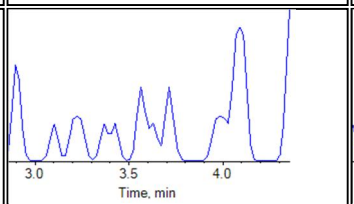
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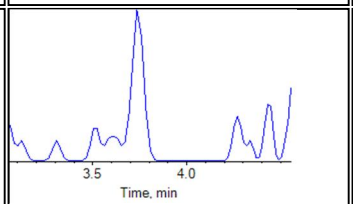
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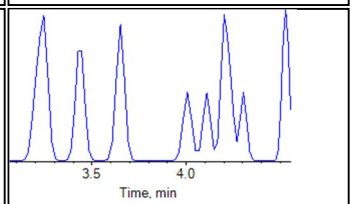
NMeFOSAA_1



NMeFOSAA_2

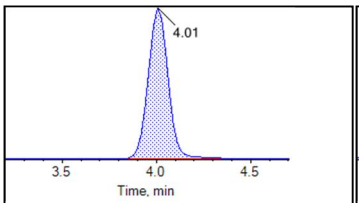


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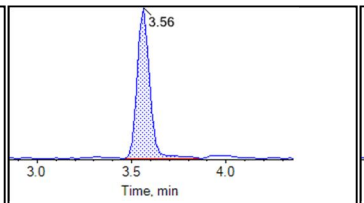


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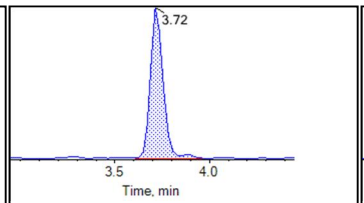
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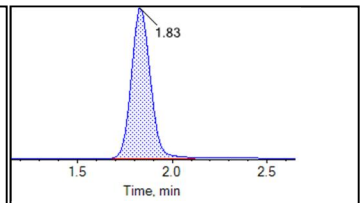
13C2-PFDoA



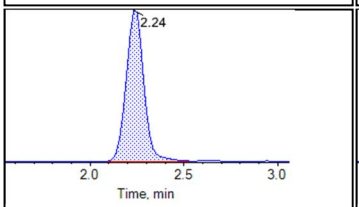
d3-MeFOSAA



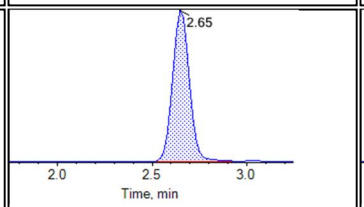
d5-EtFOSAA



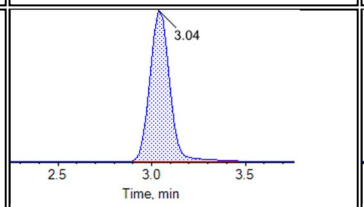
13C5-PFHxA



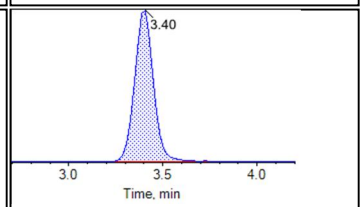
13C4-PFHpA



13C8-PFOA



13C9-PFNA

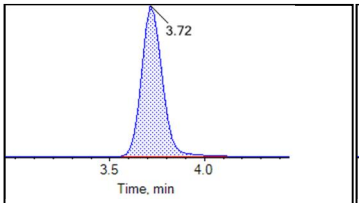


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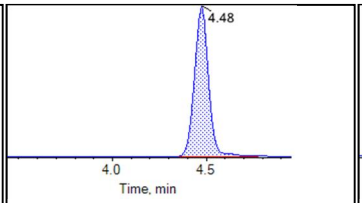
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Chromatogram Report

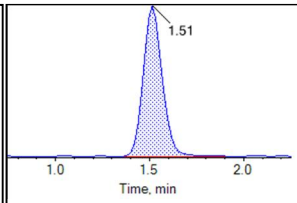
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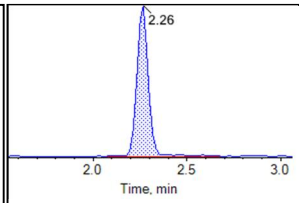
13C7-PFUnA



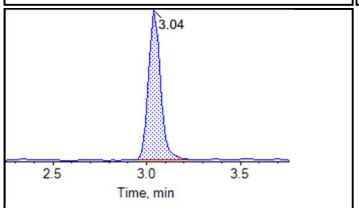
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

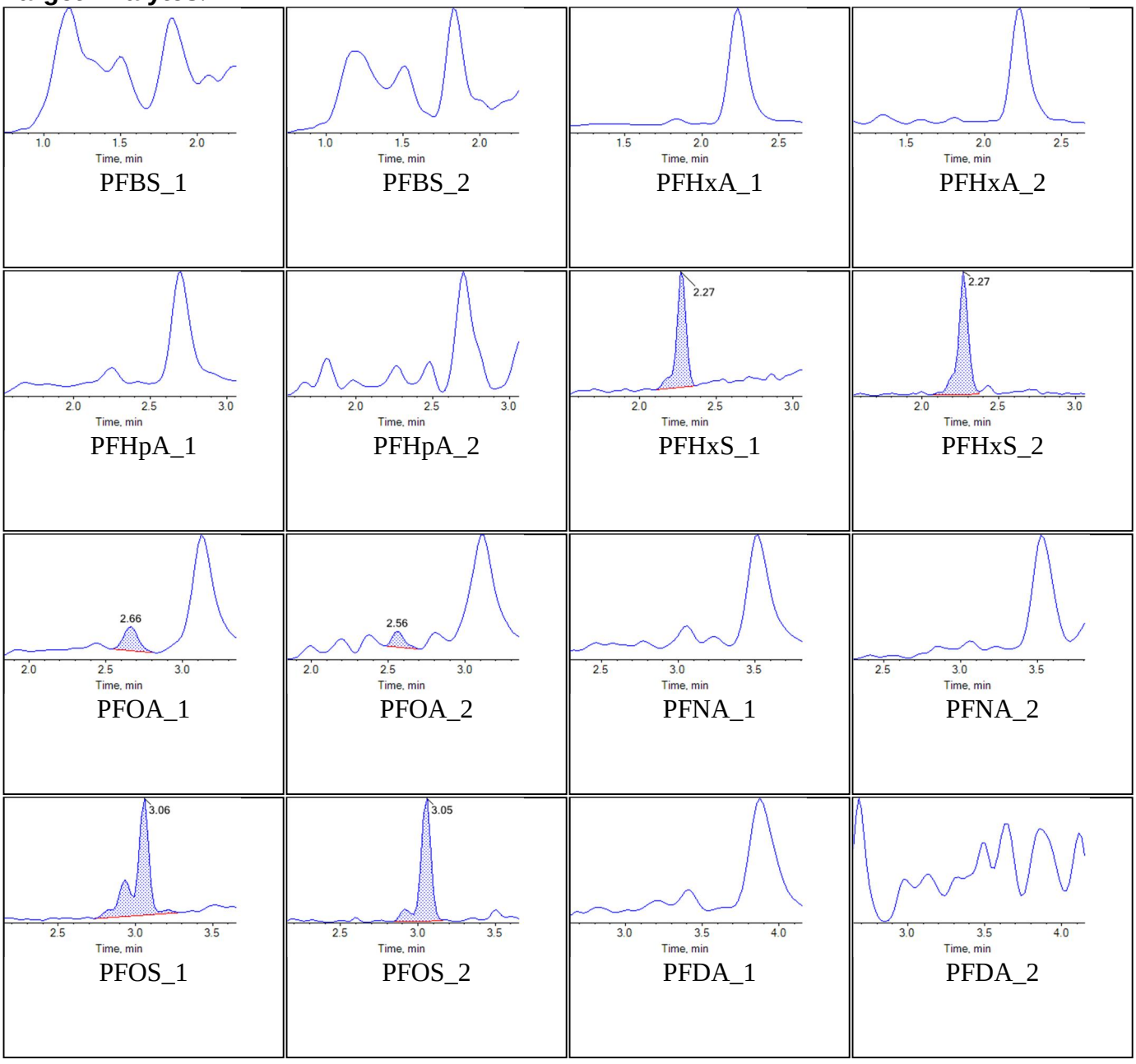
Chromatogram Report

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Sample Name	J8375-FS(3)	**Injection Vial**	1
Sample ID	VC-PM64B-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:53:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

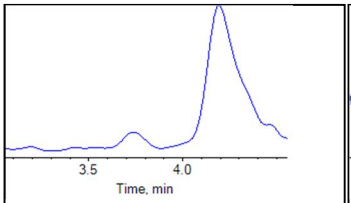
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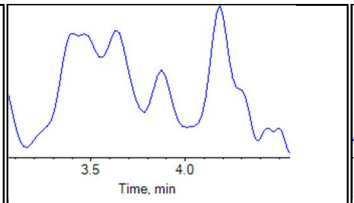
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Chromatogram Report

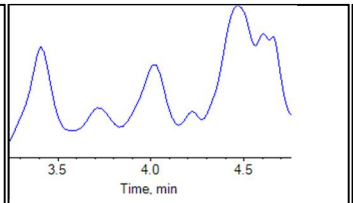
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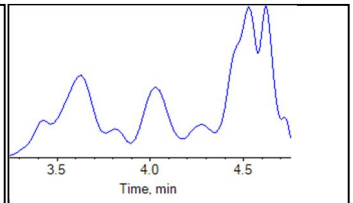
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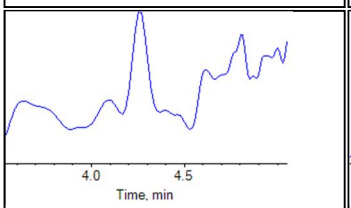
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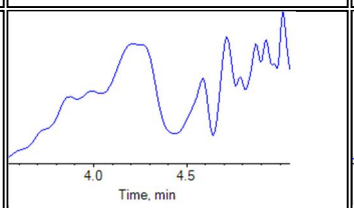
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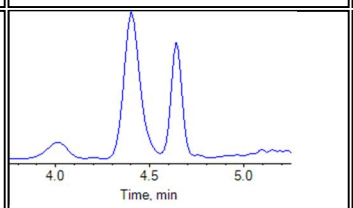
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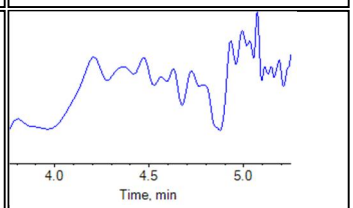
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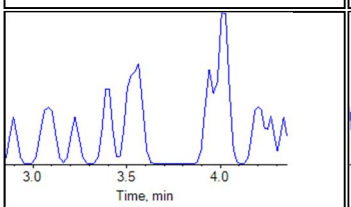
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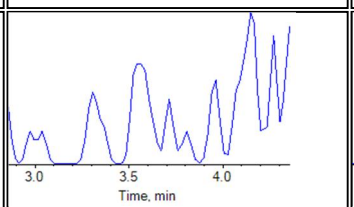
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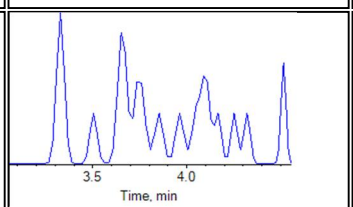
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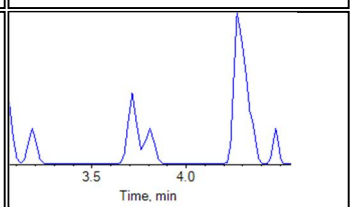
NMeFOSAA_1



NMeFOSAA_2

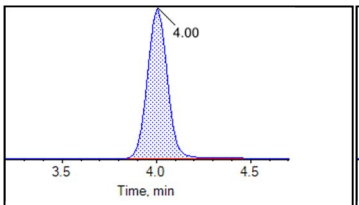


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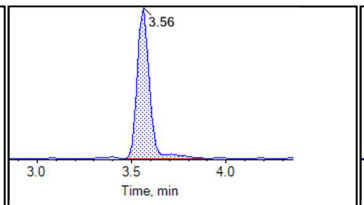


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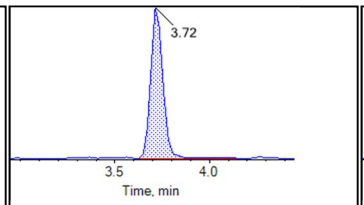
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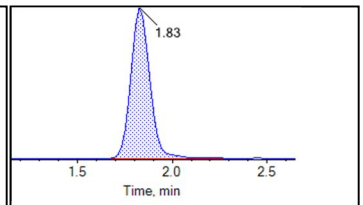
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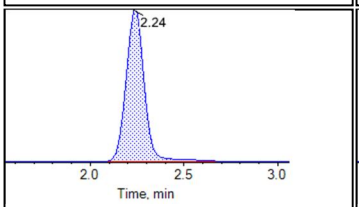
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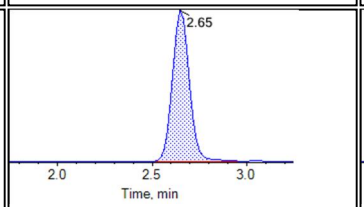
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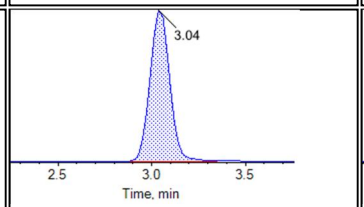
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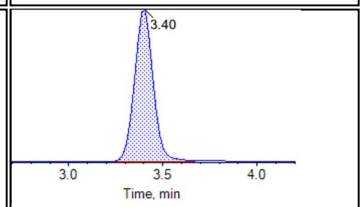
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13C8-PFOA



13C9-PFNA

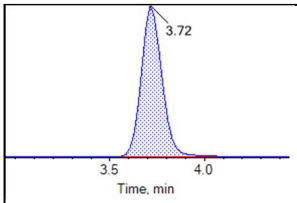


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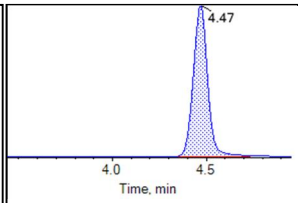
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Chromatogram Report

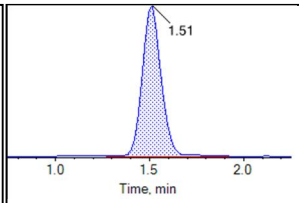
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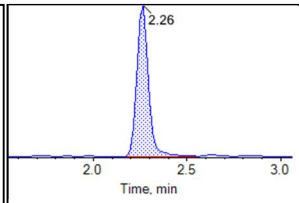
13C7-PFUnA



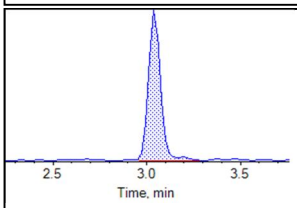
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13C3-PFBS



13C3-PFHxS



13C8-PFOS

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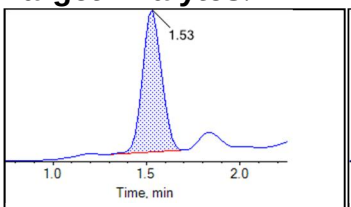
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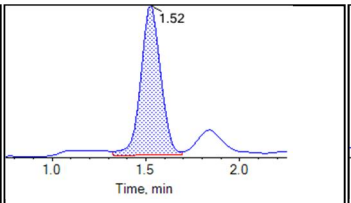
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Sample ID	VC-PM64B-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:04:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

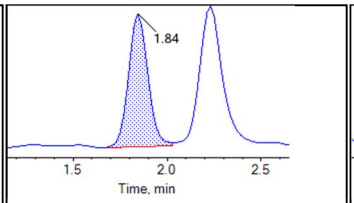
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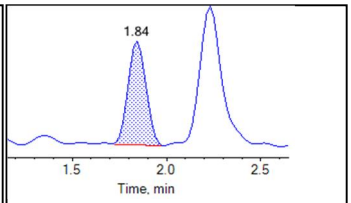
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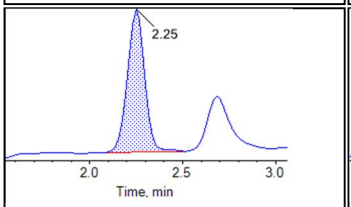
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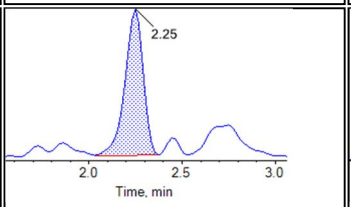
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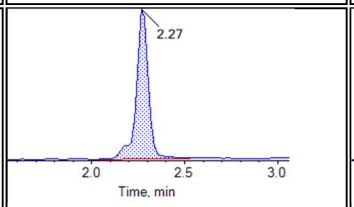
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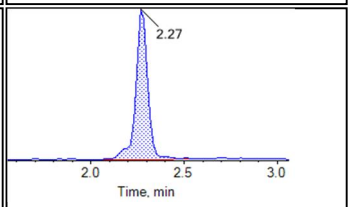
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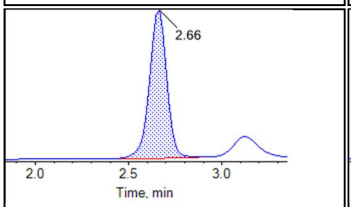
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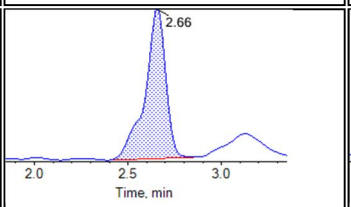
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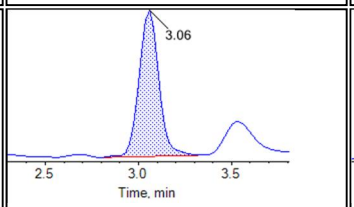
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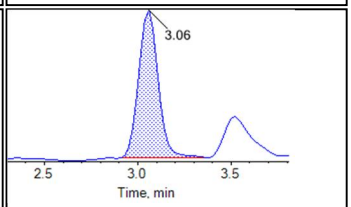
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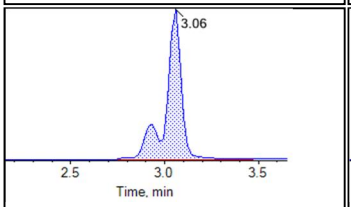
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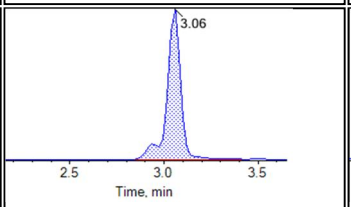
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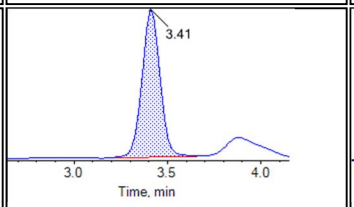
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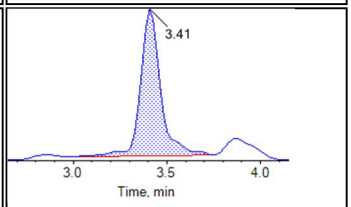
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PFOS_2



PFDA_1

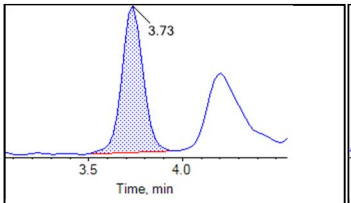


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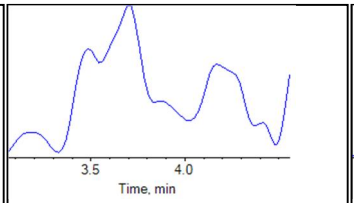
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Chromatogram Report

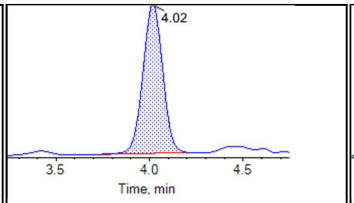
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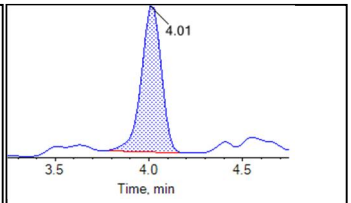
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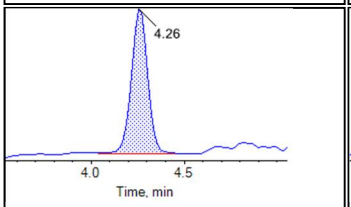
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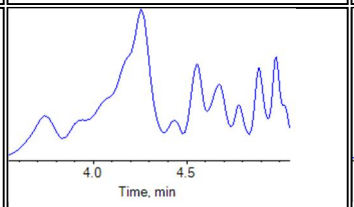
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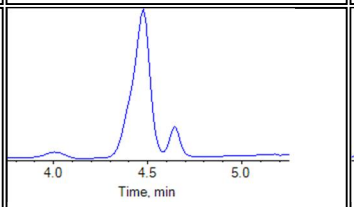
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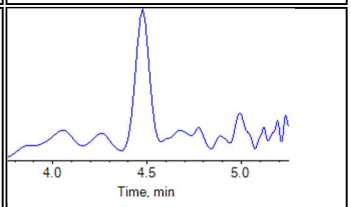
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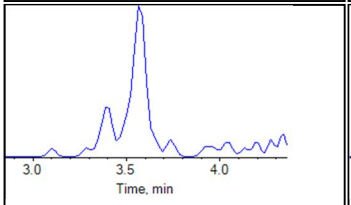
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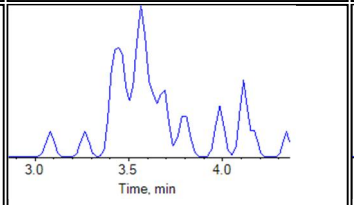
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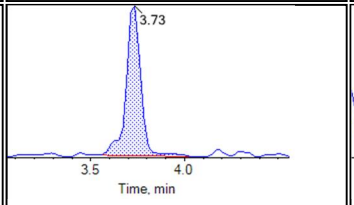
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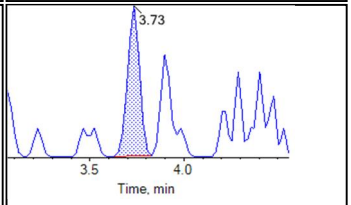
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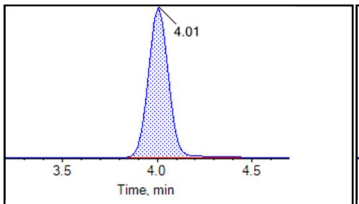


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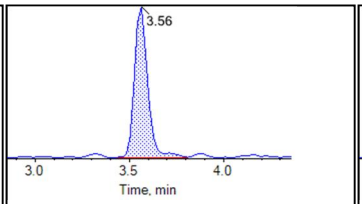


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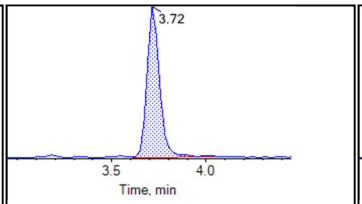
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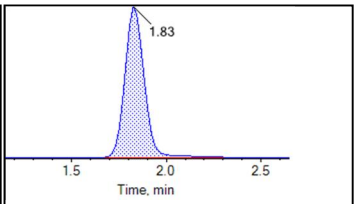
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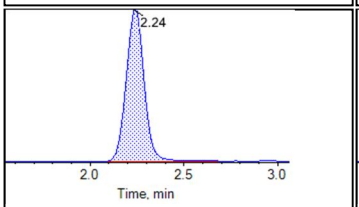
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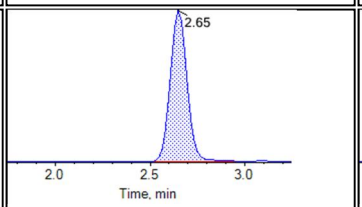
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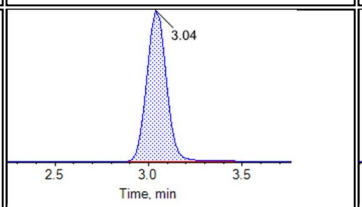
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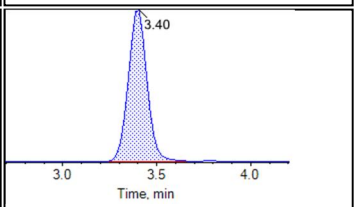
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13C8-PFOA



13C9-PFNA

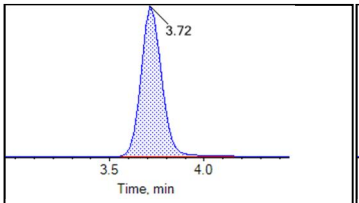


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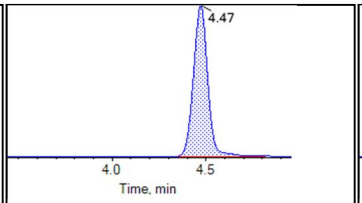
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Chromatogram Report

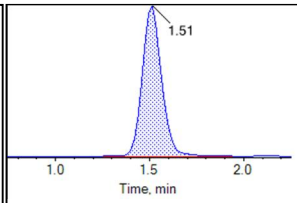
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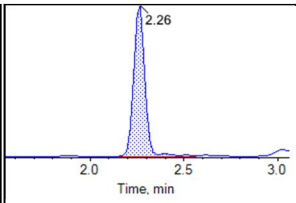
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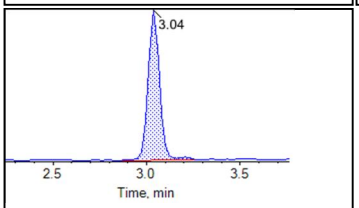
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

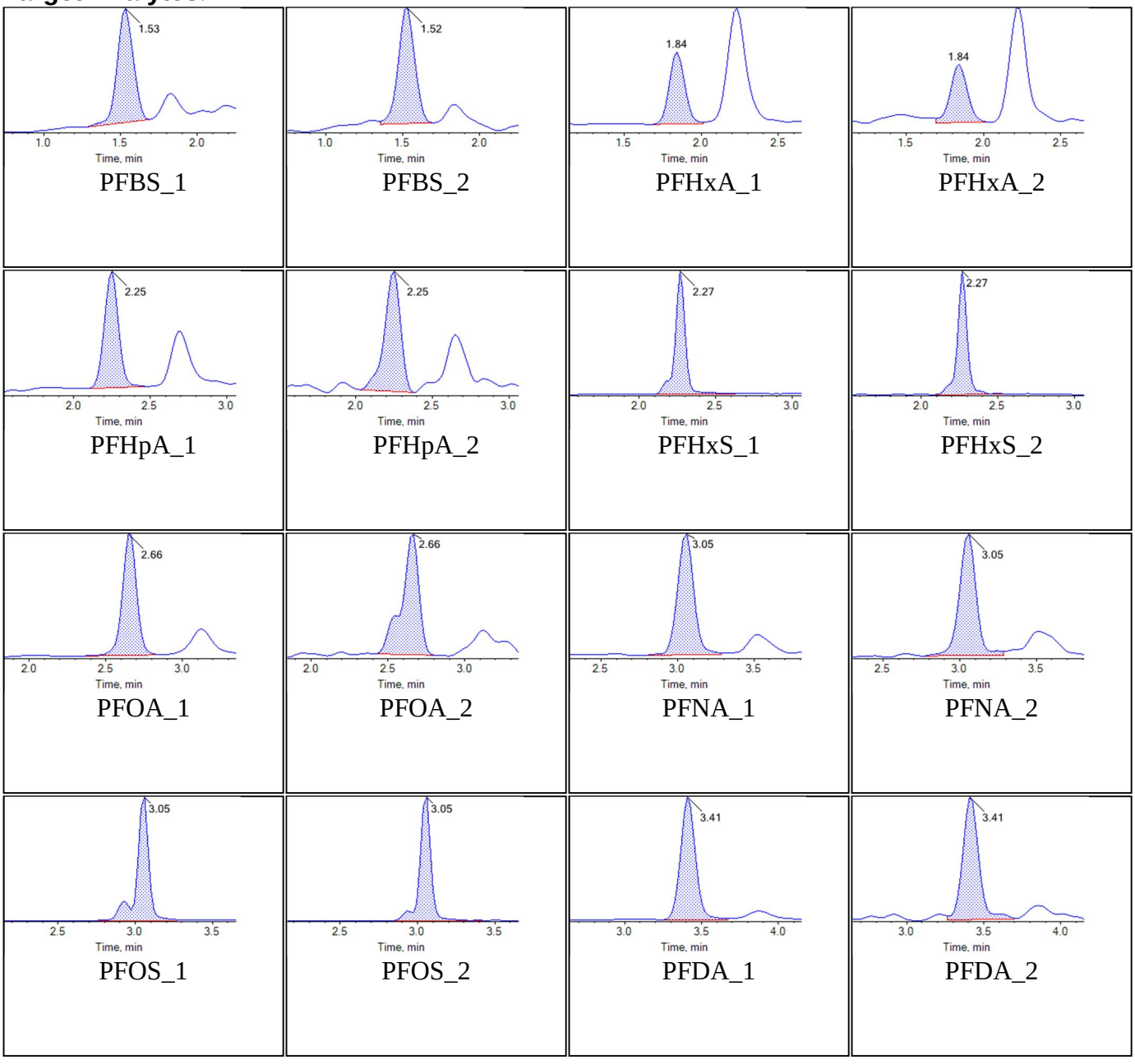
Chromatogram Report

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Sample Name	J8377-FS(3)	**Injection Vial**	3
Sample ID	VC-PM64B-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:15:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

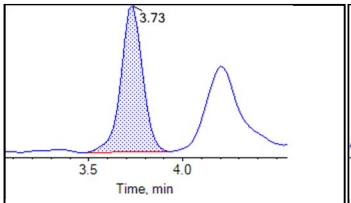
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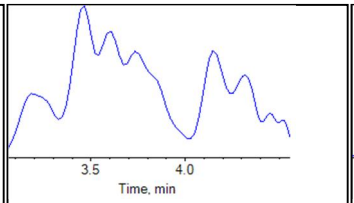
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Chromatogram Report

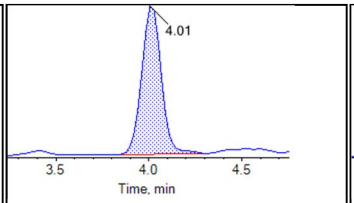
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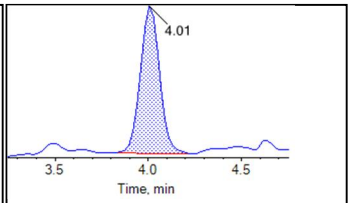
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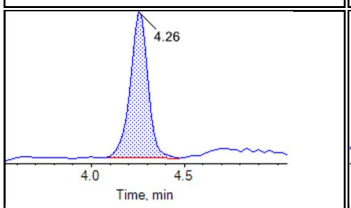
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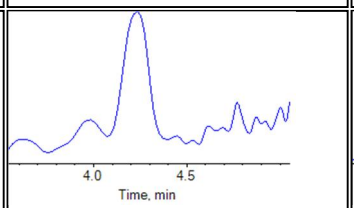
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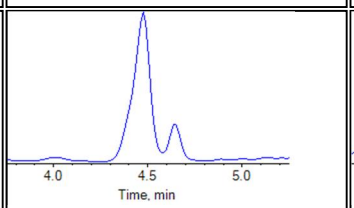
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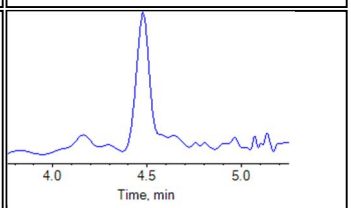
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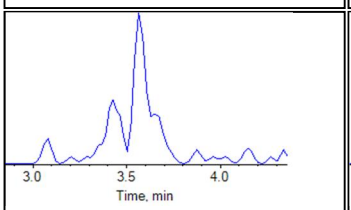
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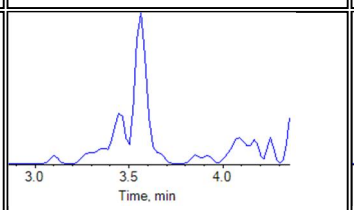
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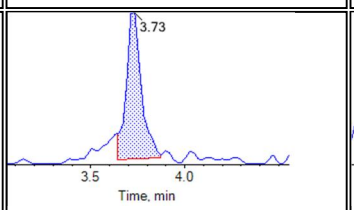
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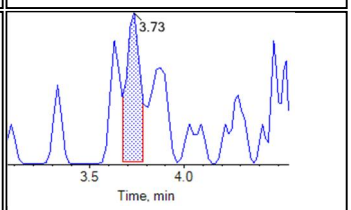
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NMeFOSAA_2

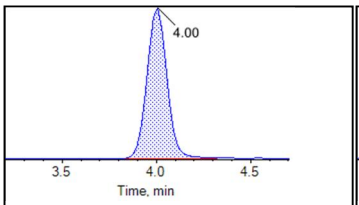


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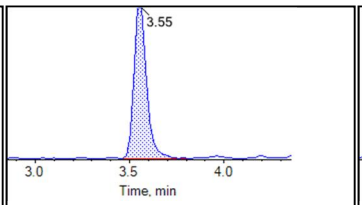


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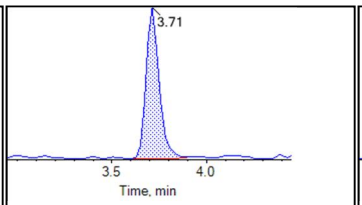
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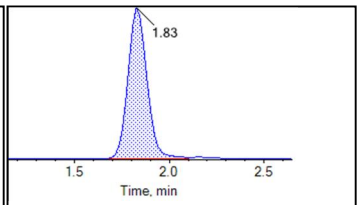
13C2-PFDoA



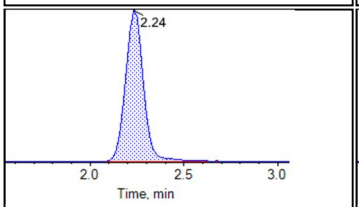
d3-MeFOSAA



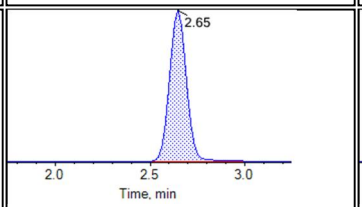
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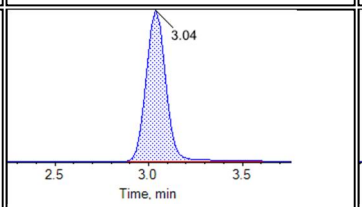
13C5-PFHxA



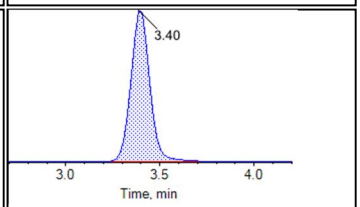
13C4-PFHpA



13C8-PFOA



13C9-PFNA

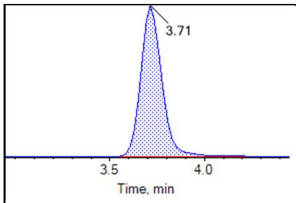


13C6-PFDA

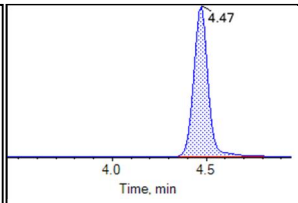
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Chromatogram Report

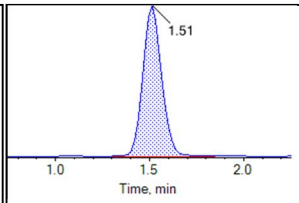
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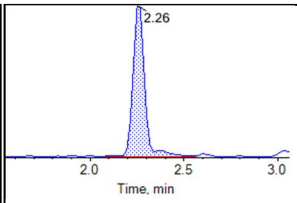
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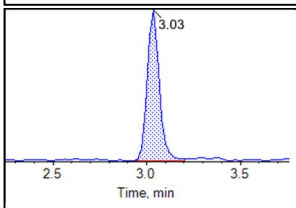
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

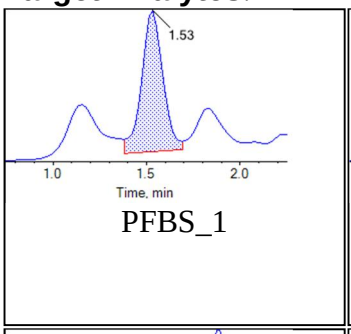
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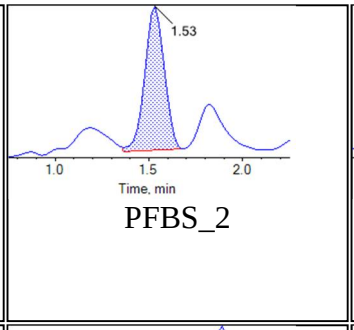
Sample Name	J8378-FS(3)	**Injection Vial**	4
Sample ID	VC-PM64B-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:26:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

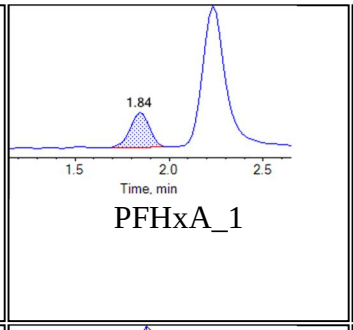
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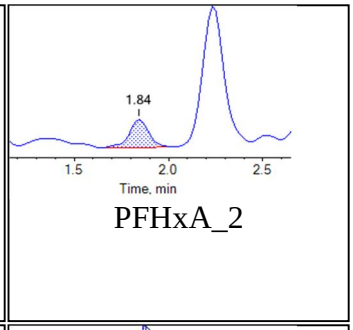
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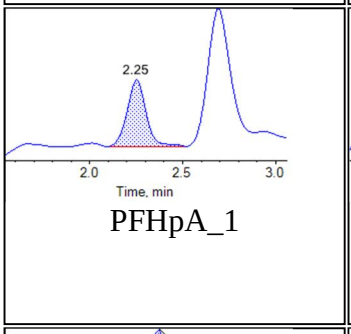
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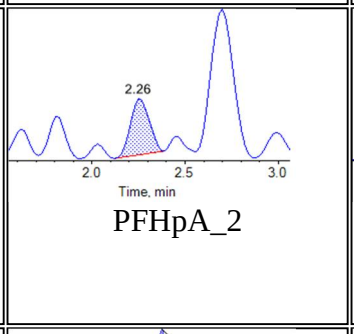
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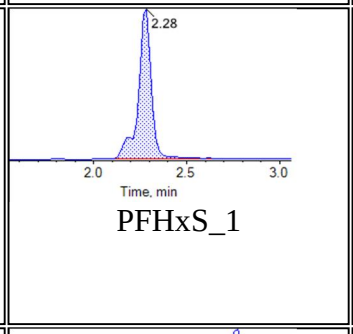
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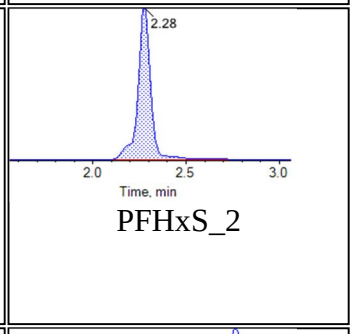
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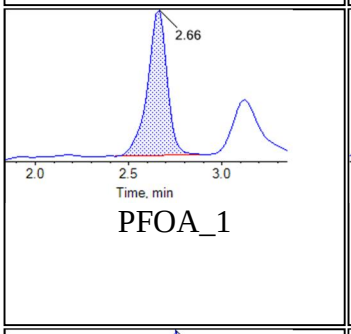
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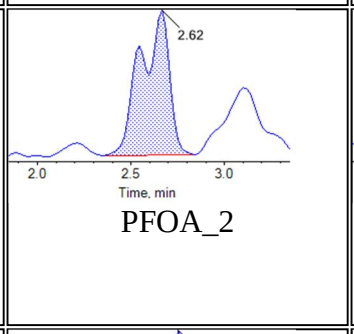
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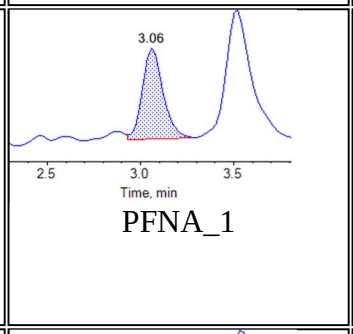
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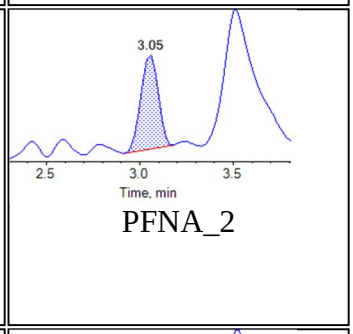
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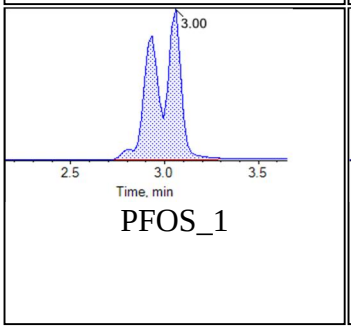
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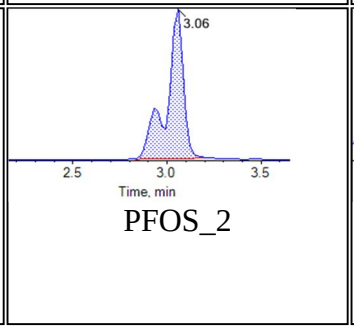
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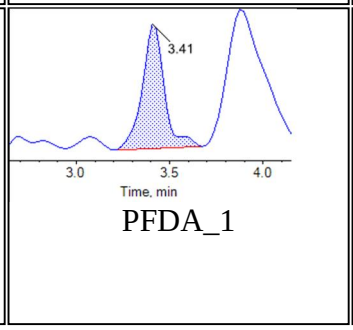
PFNA_2



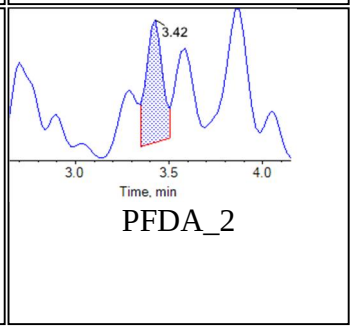
PFOS_1



PFOS_2



PFDA_1

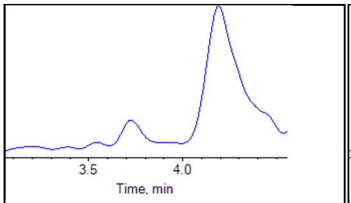


PFDA_2

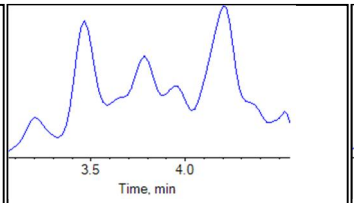
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Chromatogram Report

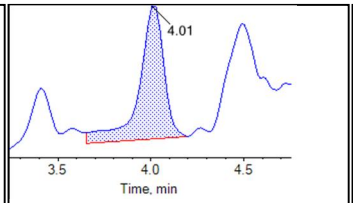
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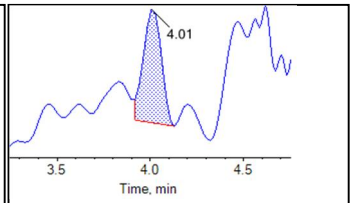
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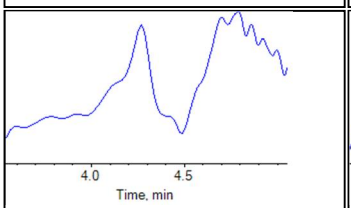
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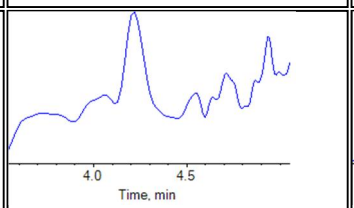
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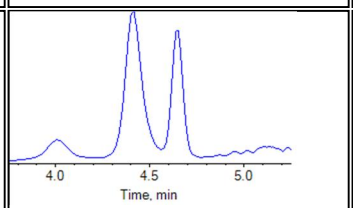
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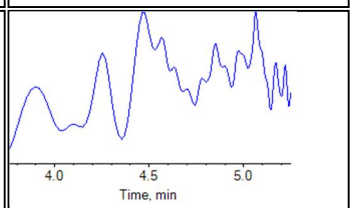
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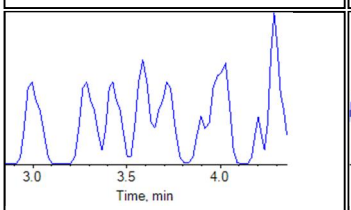
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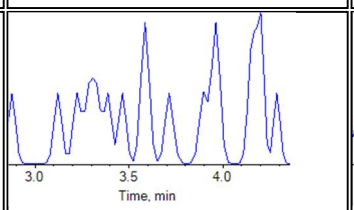
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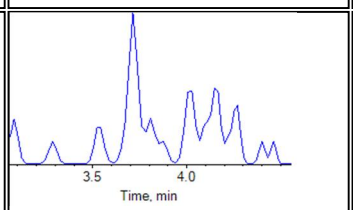
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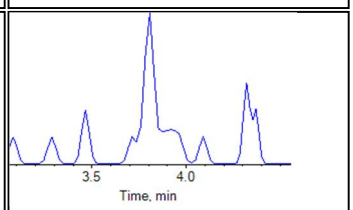
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NMeFOSAA_2

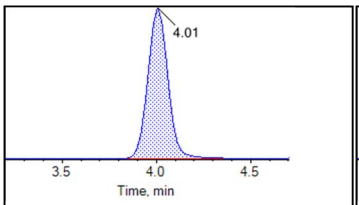


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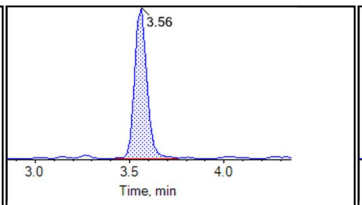


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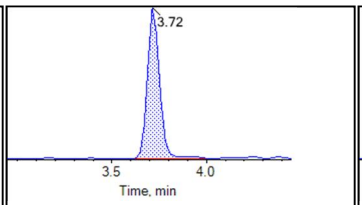
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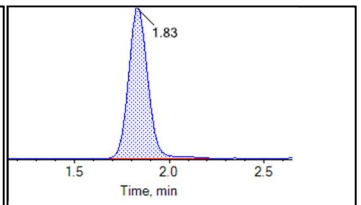
13C2-PFDoA



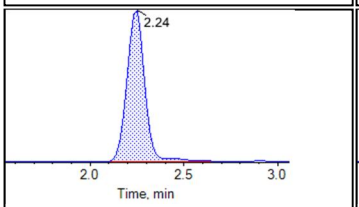
d3-MeFOSAA



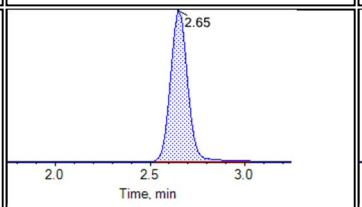
d5-EtFOSAA



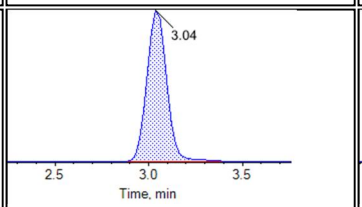
13C5-PFHxA



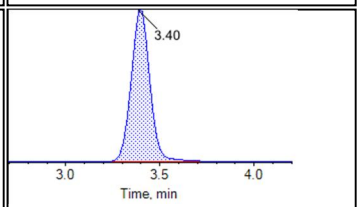
13C4-PFHpA



13C8-PFOA



13C9-PFNA

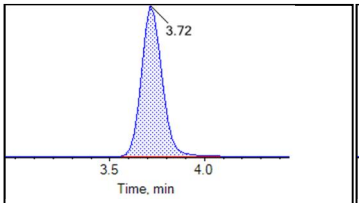


13C6-PFDA

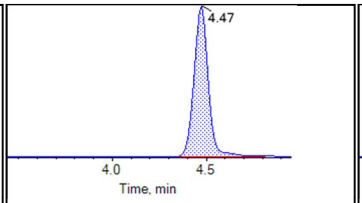
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Chromatogram Report

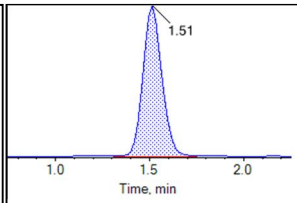
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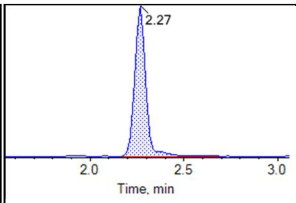
13C7-PFUnA



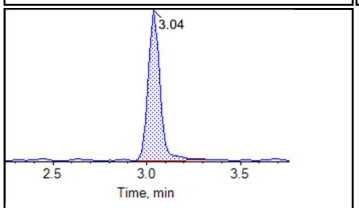
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

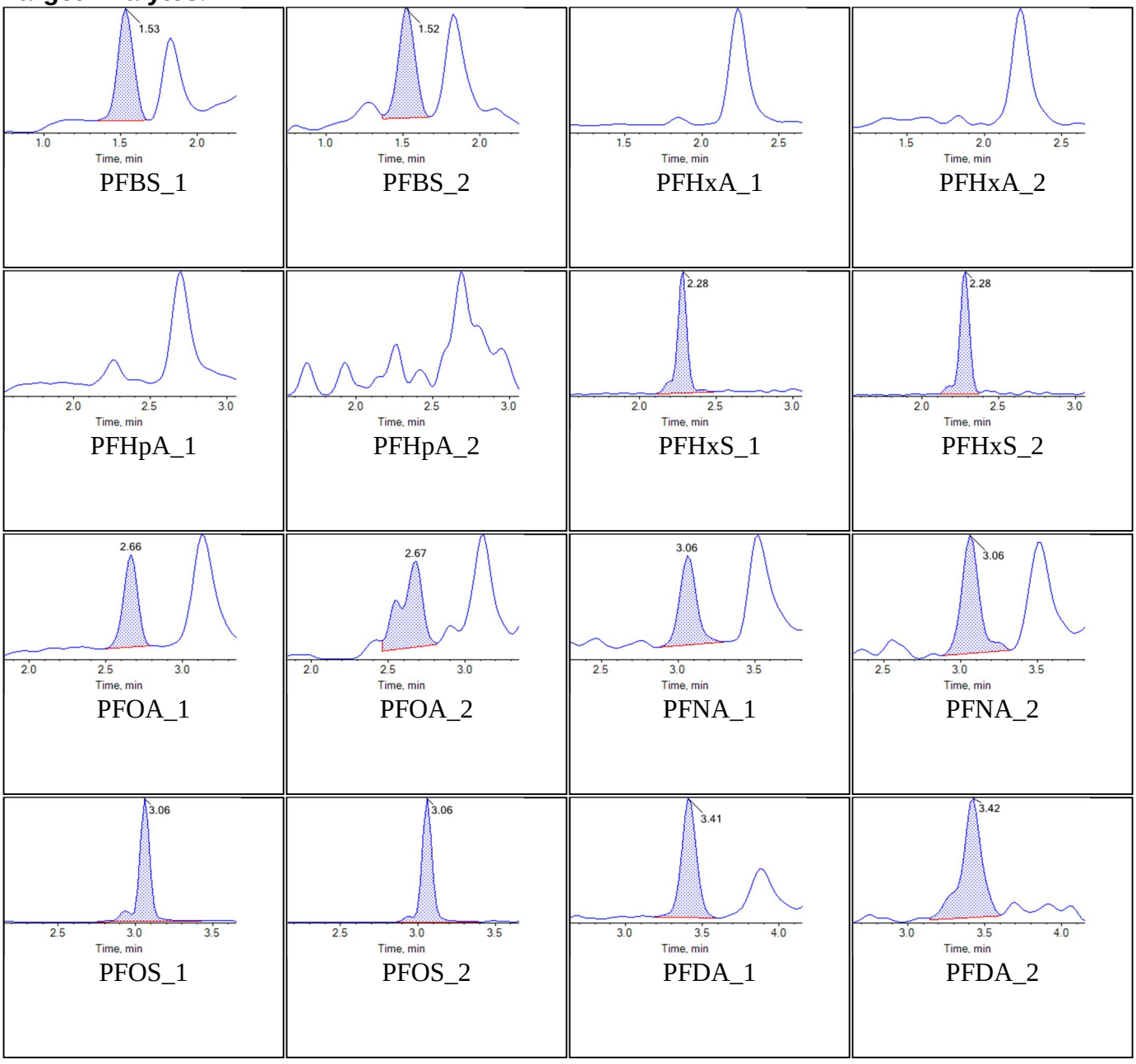
Chromatogram Report

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Sample Name	J8379-FS(3)	**Injection Vial**	5
Sample ID	VC-PM64B-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:37:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

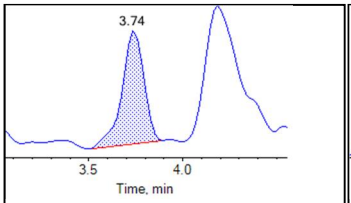
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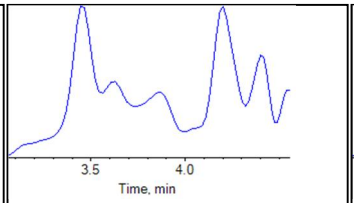
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Chromatogram Report

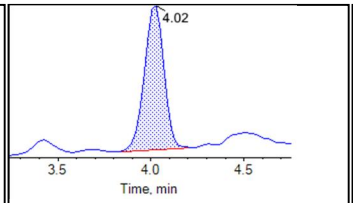
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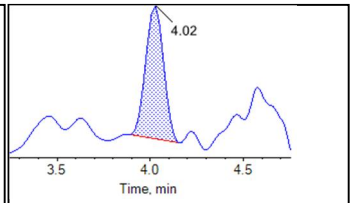
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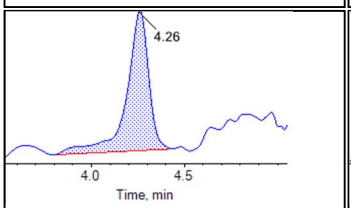
PFUnA_2



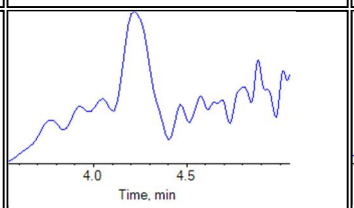
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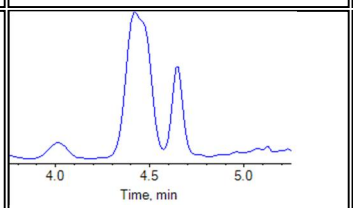
PFDoA_2



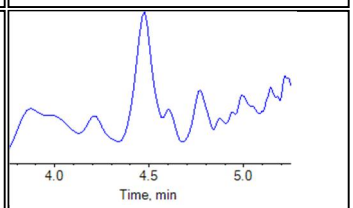
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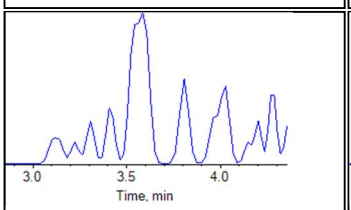
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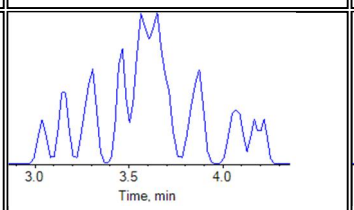
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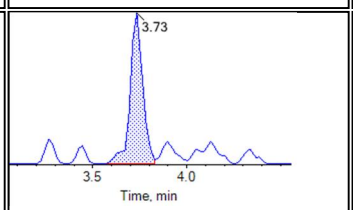
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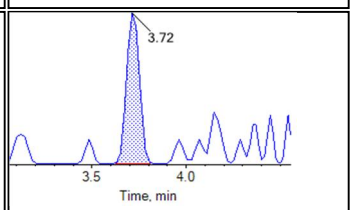
NMeFOSAA_1



NMeFOSAA_2

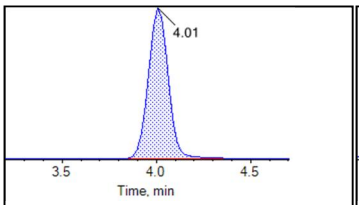


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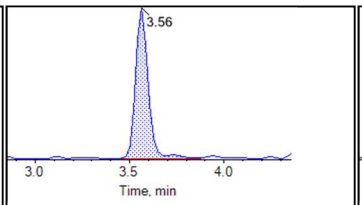


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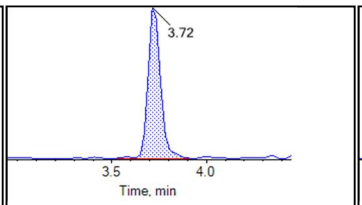
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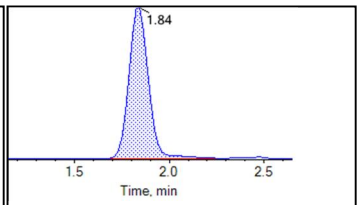
13C2-PFDoA



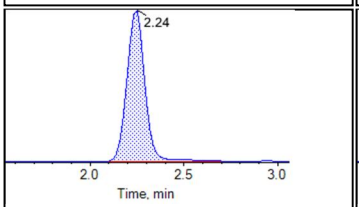
d3-MeFOSAA



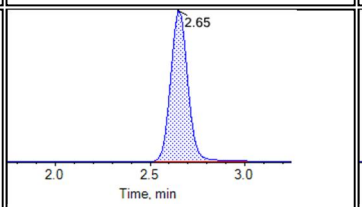
d5-EtFOSAA



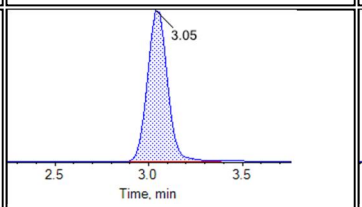
13C5-PFHxA



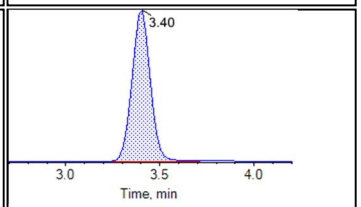
13C4-PFHpA



13C8-PFOA



13C9-PFNA

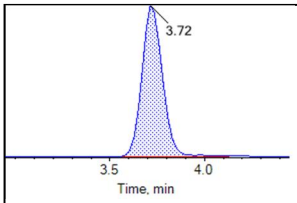


13C6-PFDA

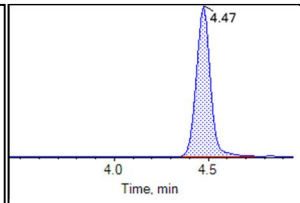
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Chromatogram Report

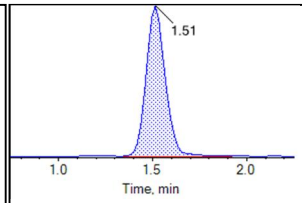
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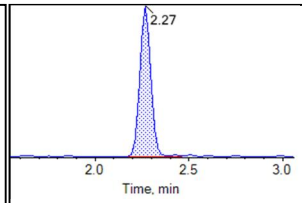
13C7-PFUnA



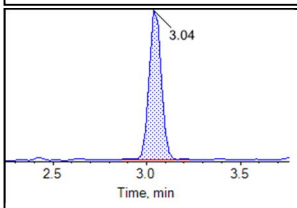
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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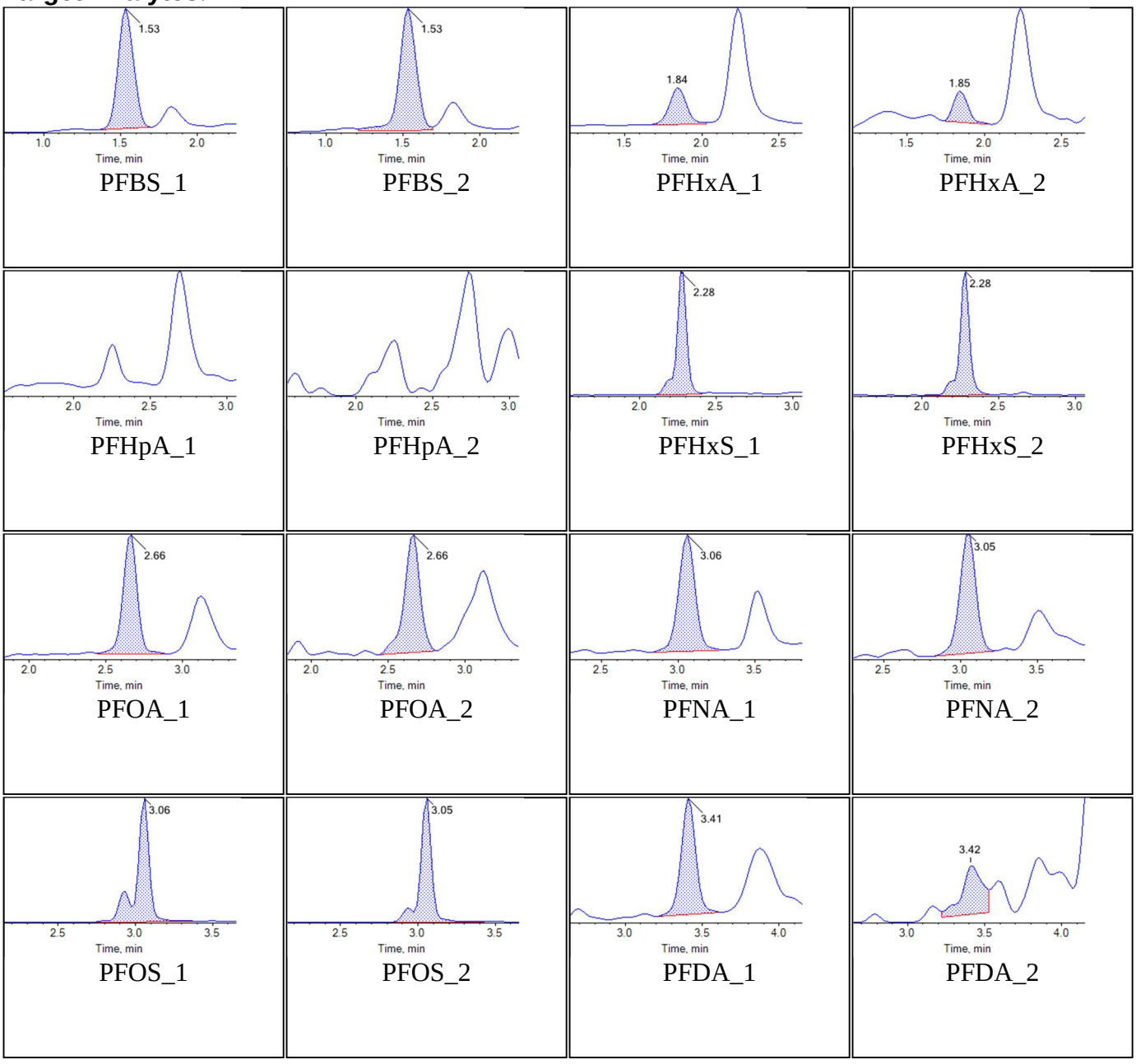
Chromatogram Report

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Sample ID	VC-PM64B-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:47:58	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

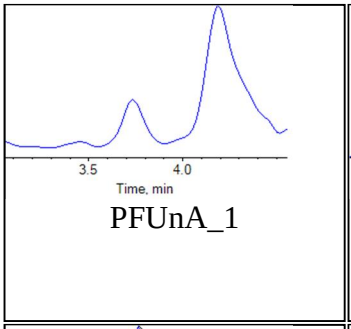
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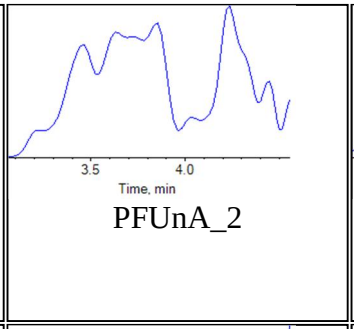
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Chromatogram Report

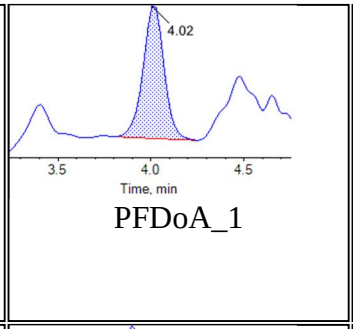
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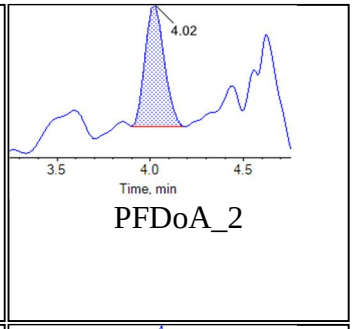
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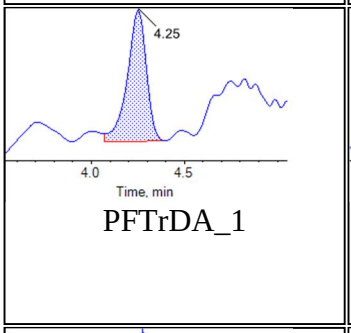
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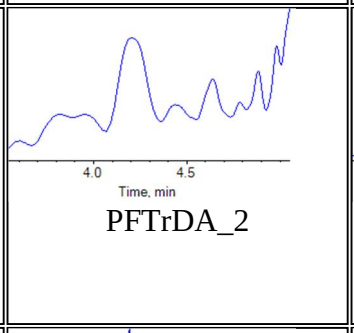
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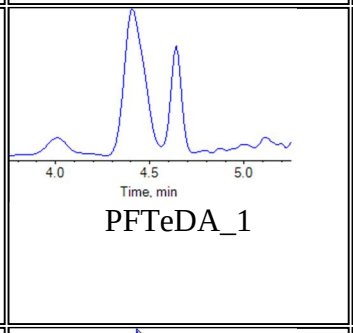
PFDoA_2



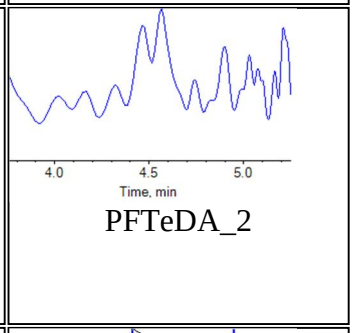
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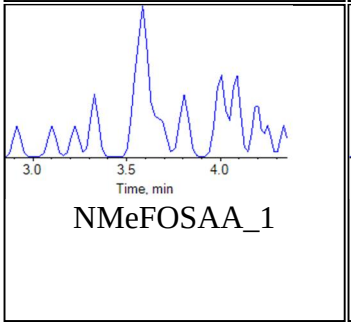
PFTrDA_2



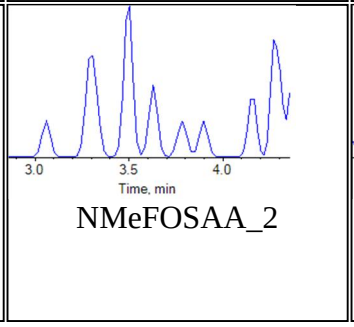
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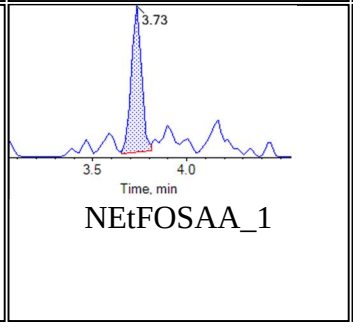
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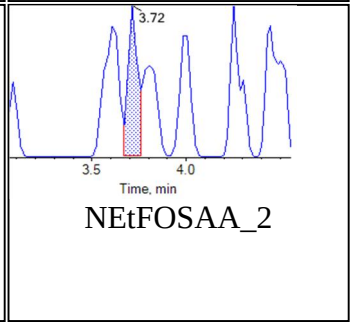
NMeFOSAA_1



NMeFOSAA_2

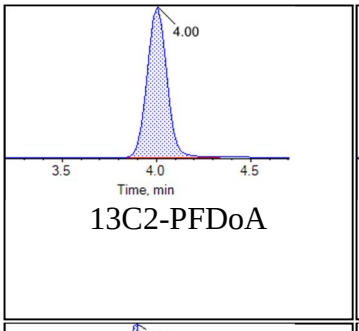


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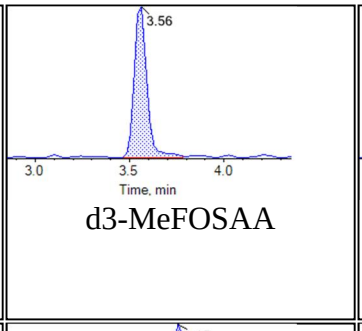


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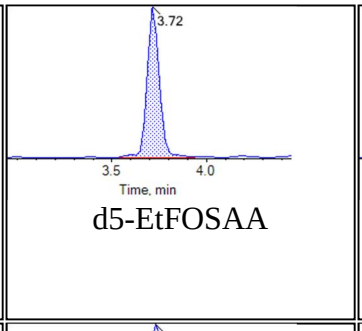
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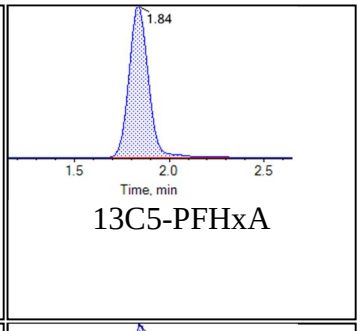
13C2-PFDoA



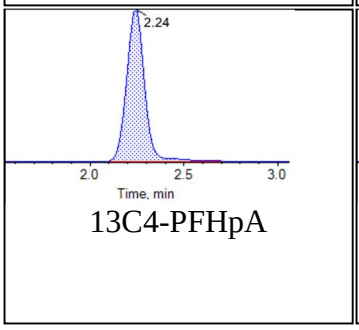
d3-MeFOSAA



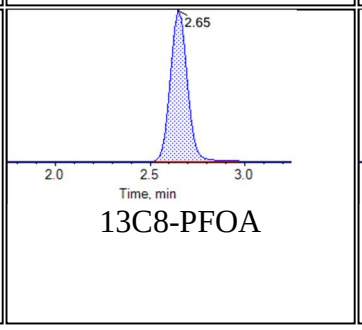
d5-EtFOSAA



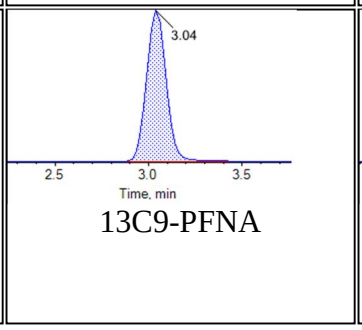
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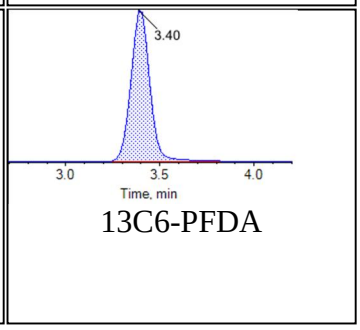
13C4-PFHpA



13C8-PFOA



13C9-PFNA

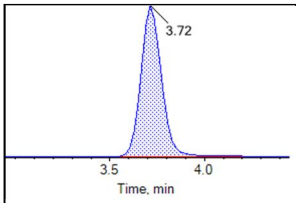


13C6-PFDA

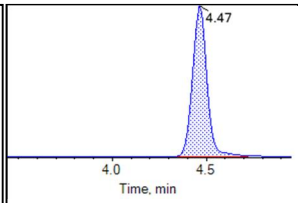
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Chromatogram Report

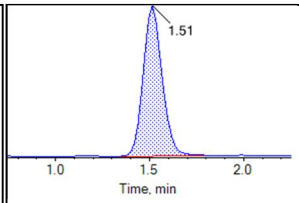
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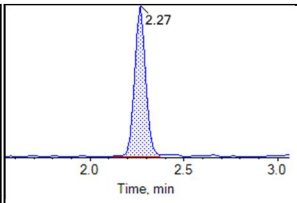
13C7-PFUnA



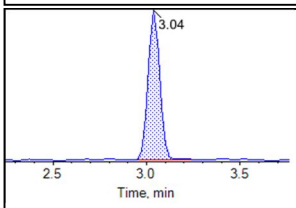
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

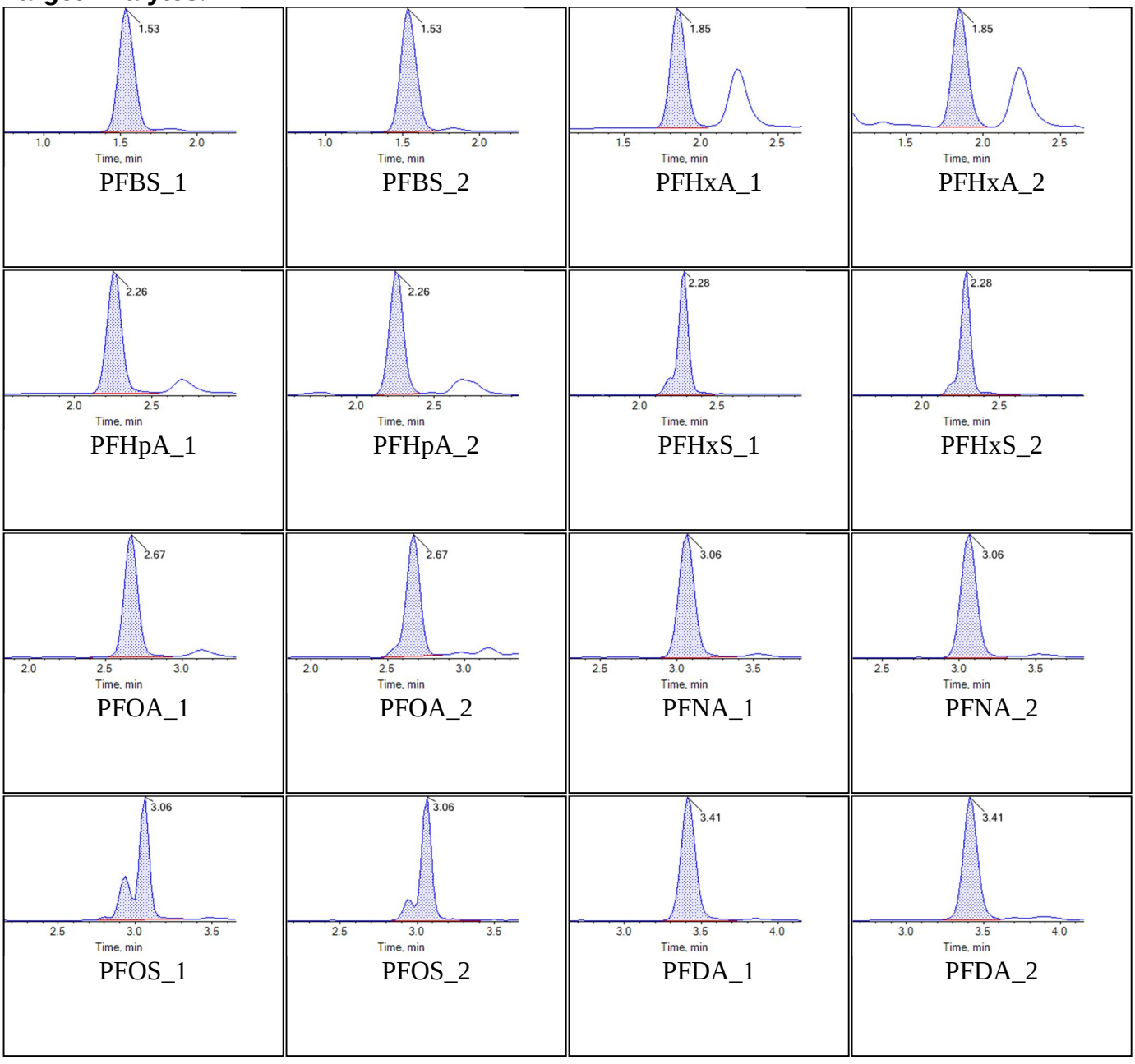
Chromatogram Report

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Printed: 09/10/2018 2:28:29 PM

Sample Name	KB76 CCV	**Injection Vial**	7
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:58:51	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

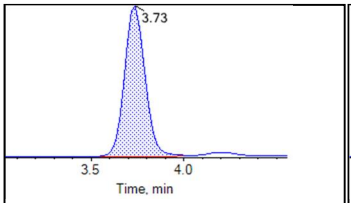
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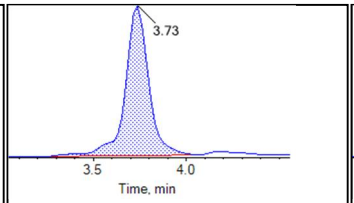
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Chromatogram Report

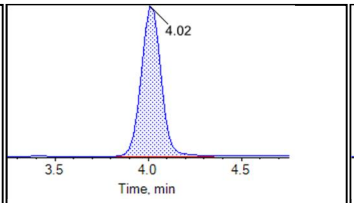
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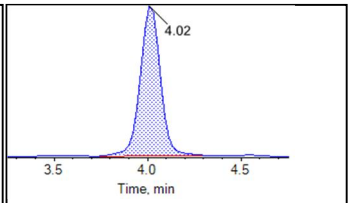
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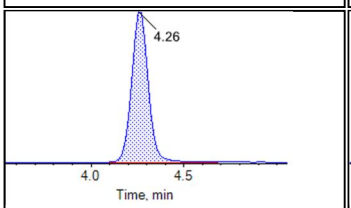
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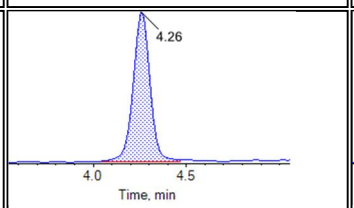
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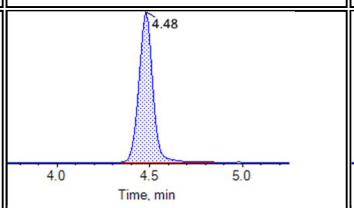
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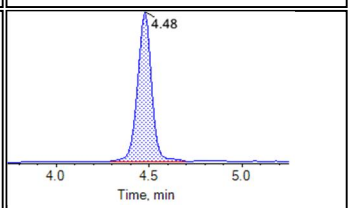
PFTrDA_1



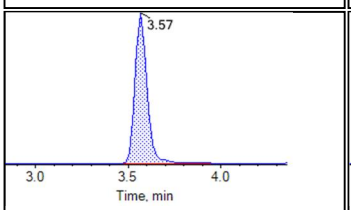
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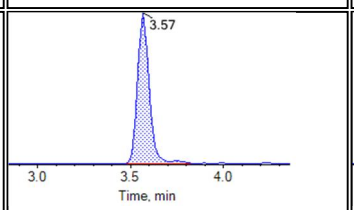
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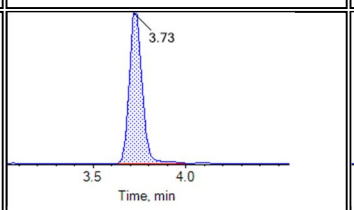
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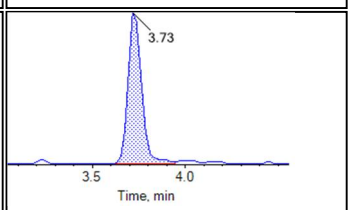
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NMeFOSAA_2

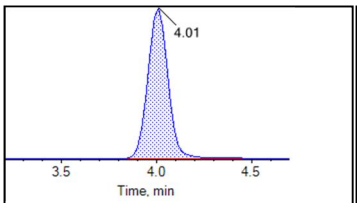


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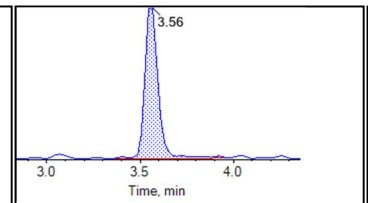


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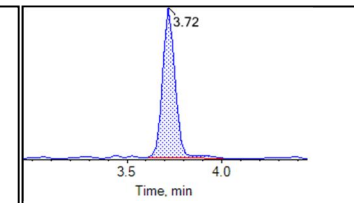
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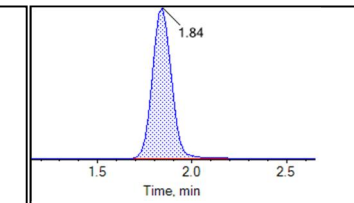
13C2-PFDoA



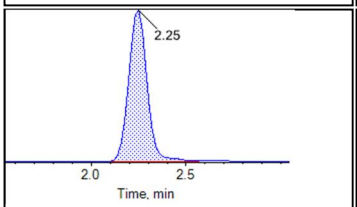
d3-MeFOSAA



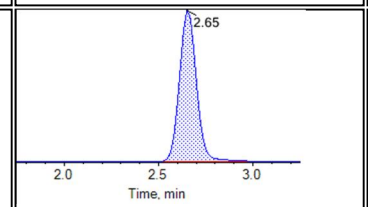
d5-EtFOSAA



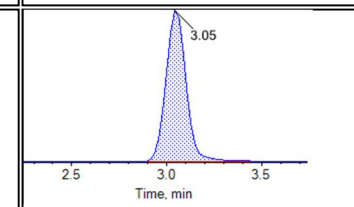
13C5-PFHxA



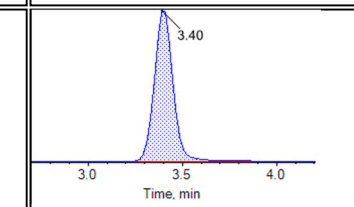
13C4-PFHpA



13C8-PFOA



13C9-PFNA

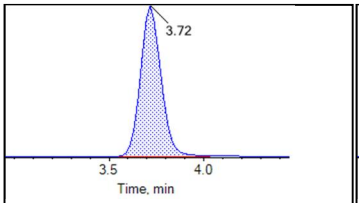


13C6-PFDA

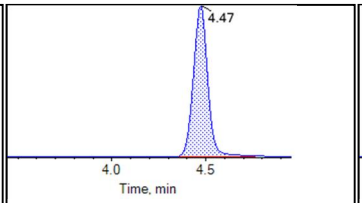
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Chromatogram Report

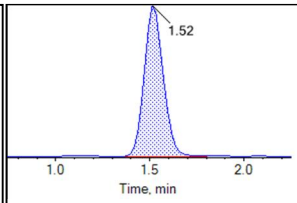
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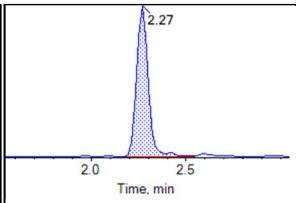
13C7-PFUnA



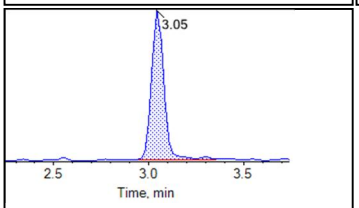
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

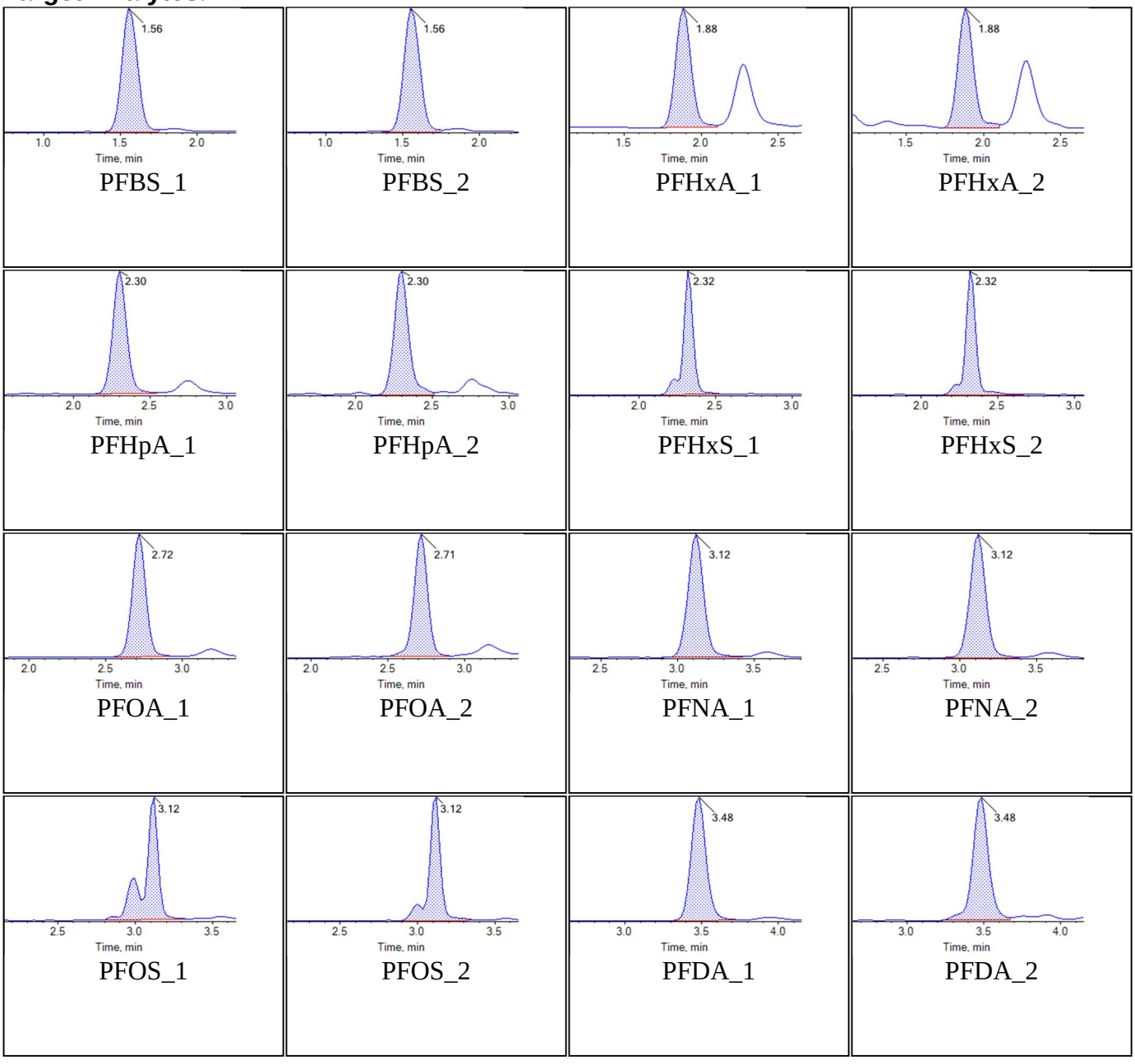
Chromatogram Report

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Sample Name	KB76	**Injection Vial**	5
Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:12:44	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

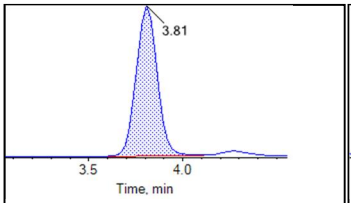
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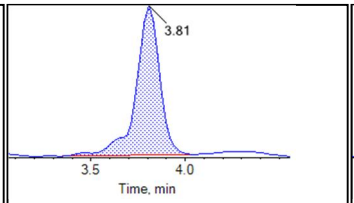
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Chromatogram Report

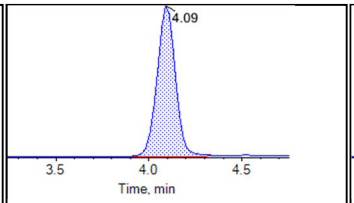
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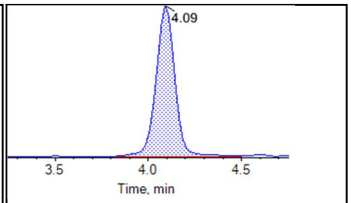
PFUnA_1



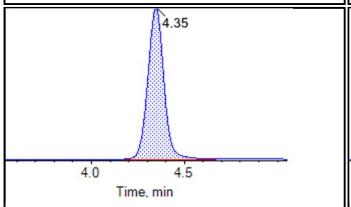
PFUnA_2



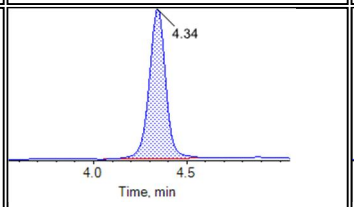
PFDoA_1



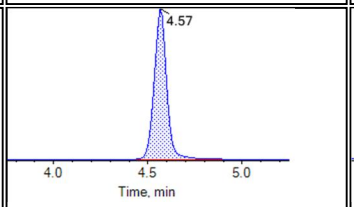
PFDoA_2



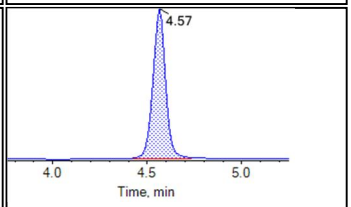
PFTrDA_1



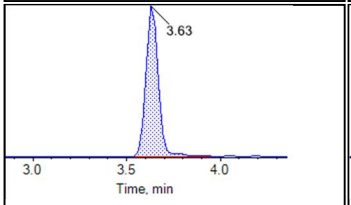
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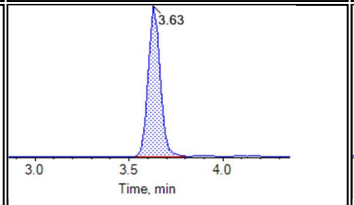
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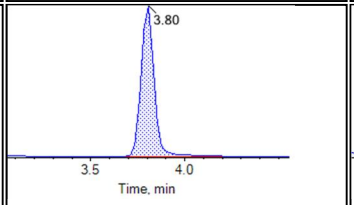
PFTeDA_2



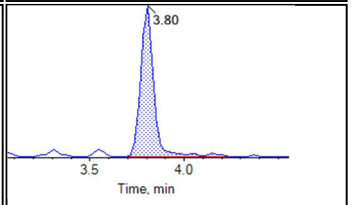
NMeFOSAA_1



NMeFOSAA_2

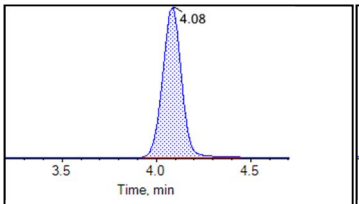


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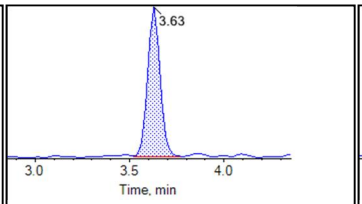


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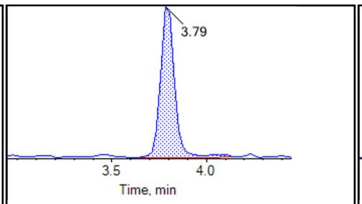
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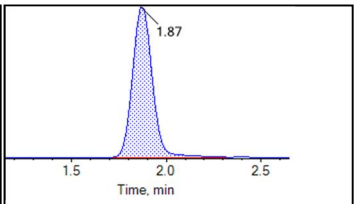
13C2-PFDoA



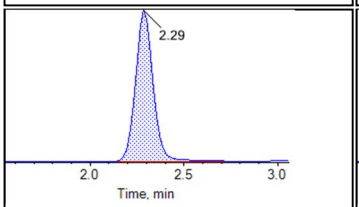
d3-MeFOSAA



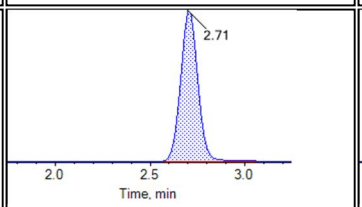
d5-EtFOSAA



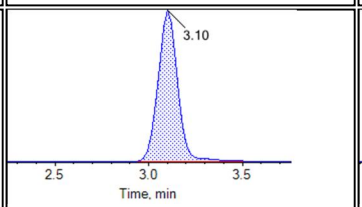
13C5-PFHxA



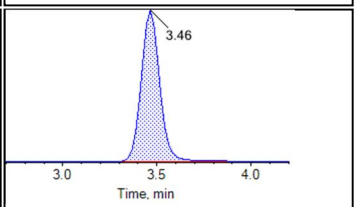
13C4-PFHpA



13C8-PFOA



13C9-PFNA

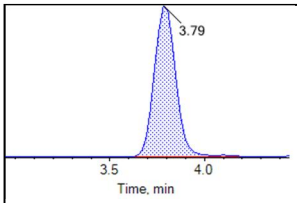


13C6-PFDA

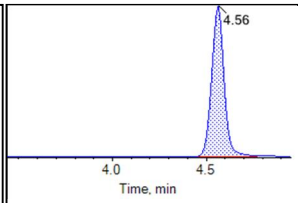
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Chromatogram Report

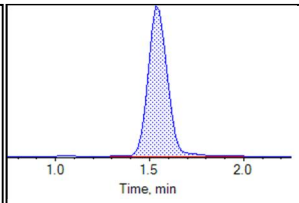
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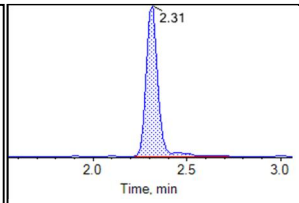
13C7-PFUnA



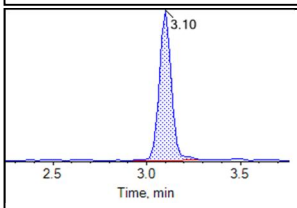
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

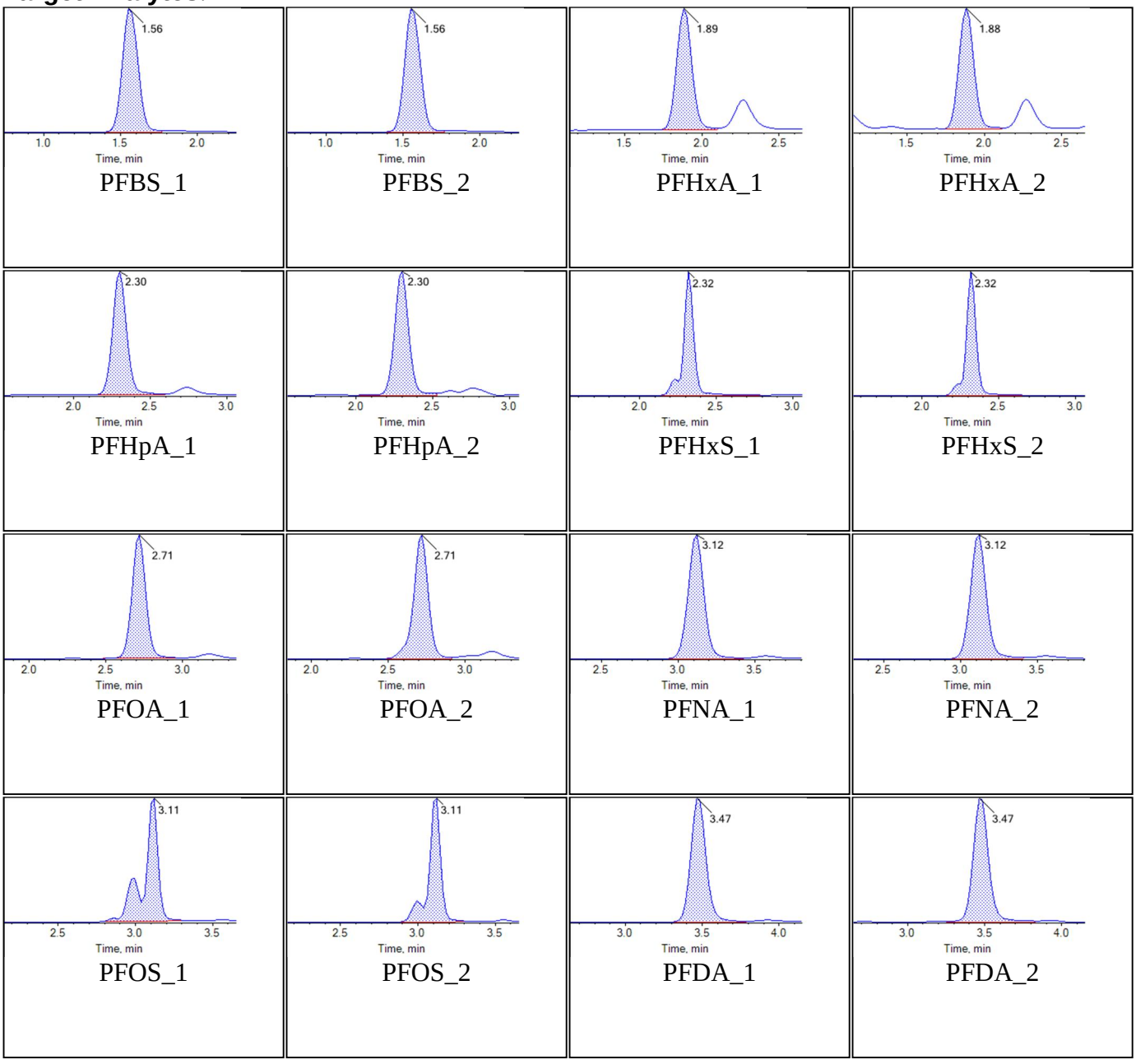
Chromatogram Report

Created with Analyst Reporter
Printed: 09/10/2018 2:24:40 PM

Sample Name	KB77	**Injection Vial**	6
Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:23:36	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

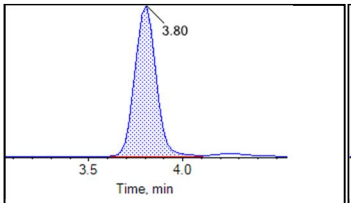
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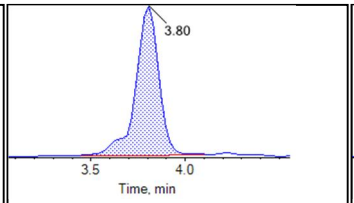
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Chromatogram Report

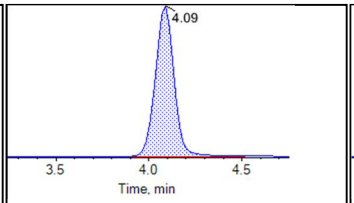
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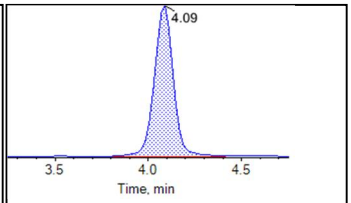
PFUnA_1



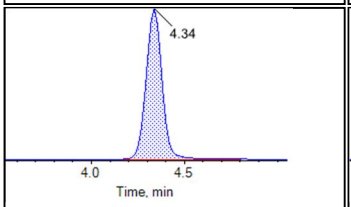
PFUnA_2



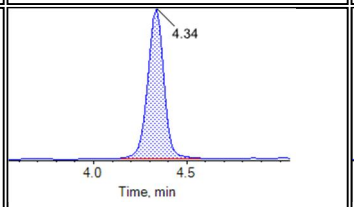
PFDoA_1



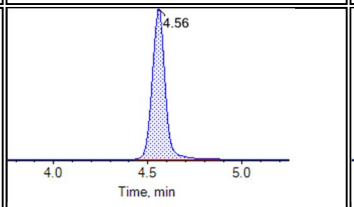
PFDoA_2



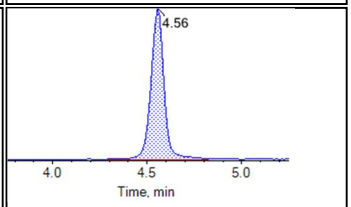
PFTrDA_1



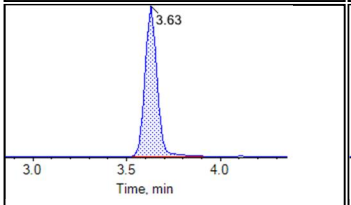
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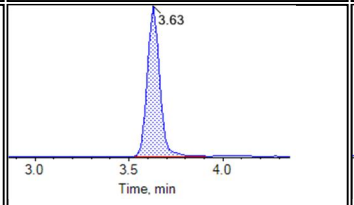
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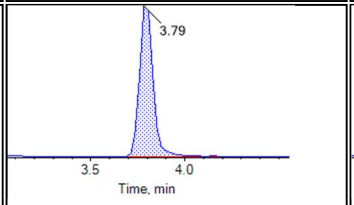
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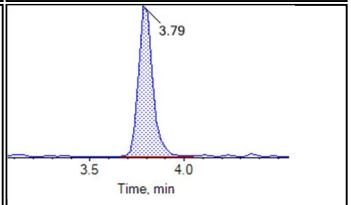
NMeFOSAA_1



NMeFOSAA_2

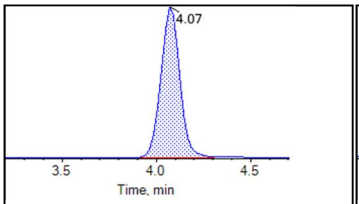


NEtFOSAA_1

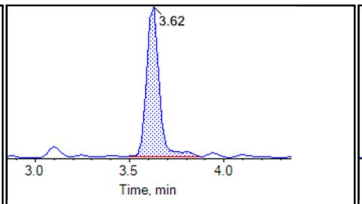


NEtFOSAA_2

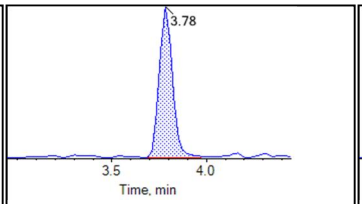
Internal Standards:



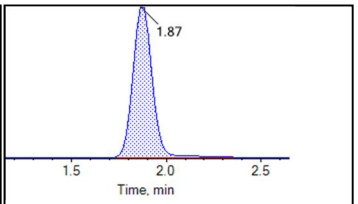
13C2-PFDoA



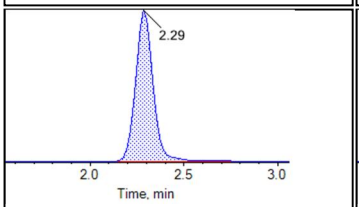
d3-MeFOSAA



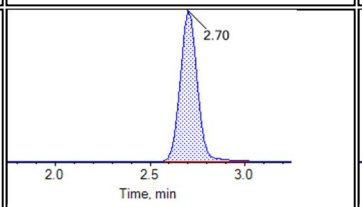
d5-EtFOSAA



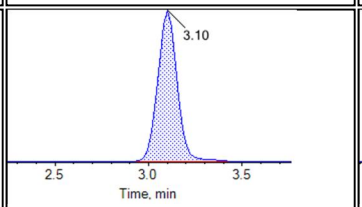
13C5-PFHxA



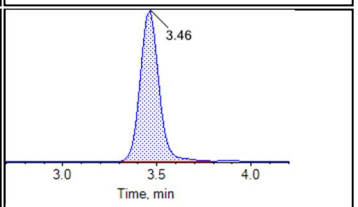
13C4-PFHpA



13C8-PFOA



13C9-PFNA

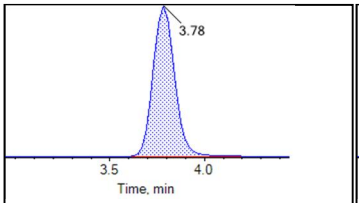


13C6-PFDA

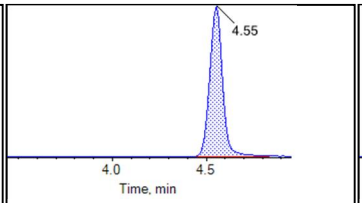
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Chromatogram Report

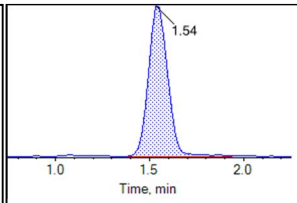
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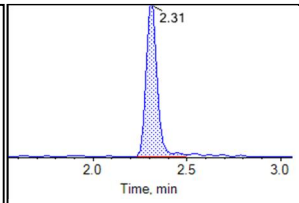
13C7-PFUnA



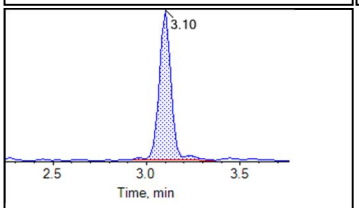
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

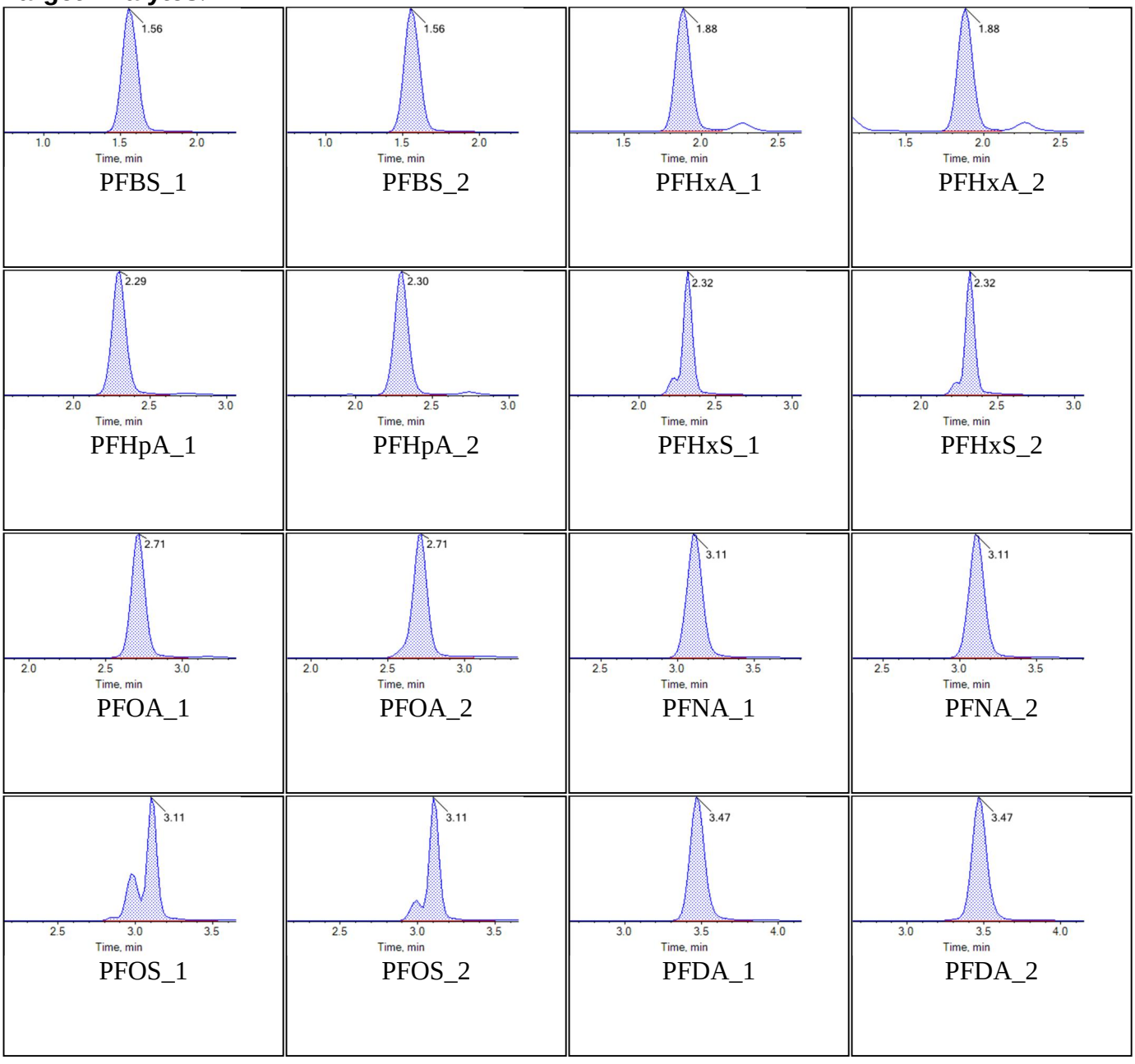
Chromatogram Report

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Printed: 09/10/2018 2:24:46 PM

Sample Name	KB78	**Injection Vial**	7
Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:34:28	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

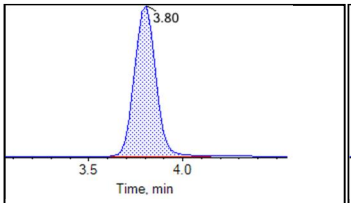
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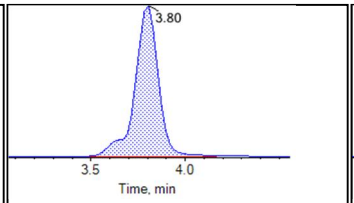
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Chromatogram Report

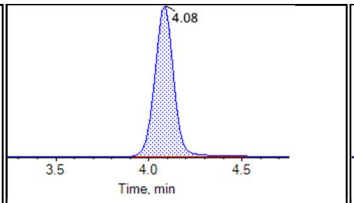
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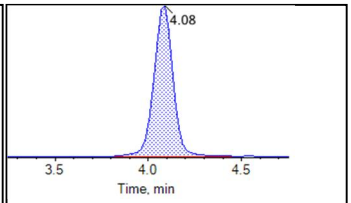
PFUnA_1



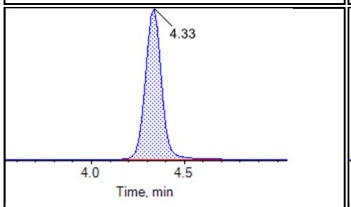
PFUnA_2



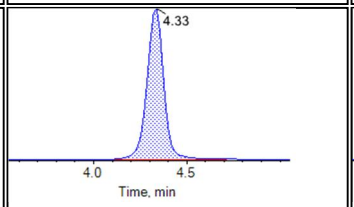
PFDoA_1



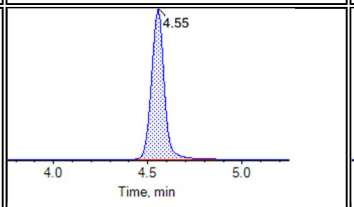
PFDoA_2



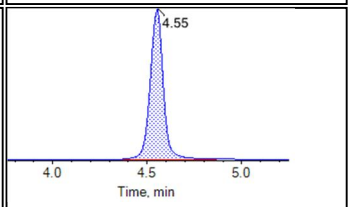
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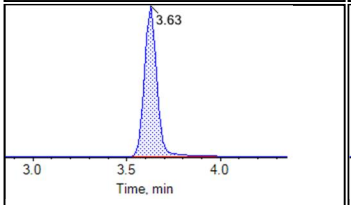
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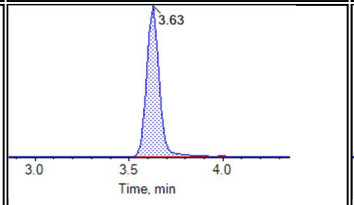
PFTeDA_1



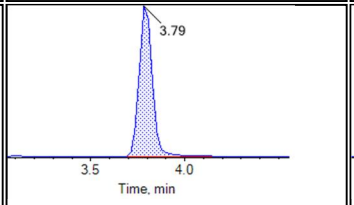
PFTeDA_2



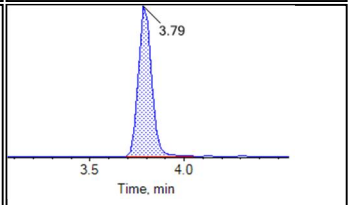
NMeFOSAA_1



NMeFOSAA_2

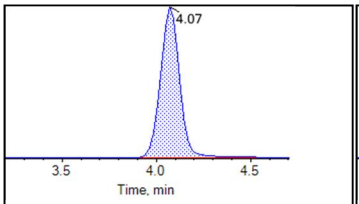


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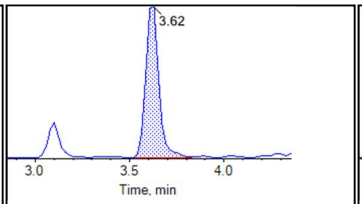


NEtFOSAA_2

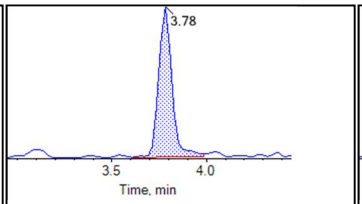
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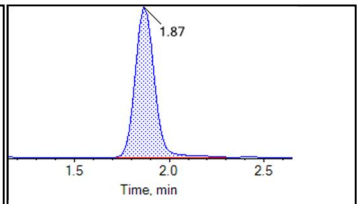
13C2-PFDoA



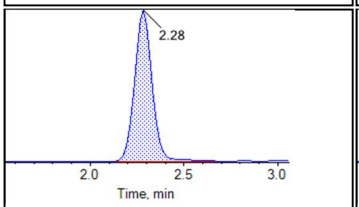
d3-MeFOSAA



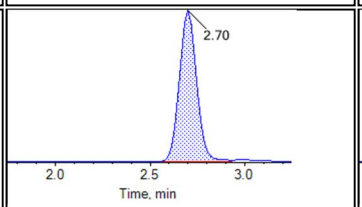
d5-EtFOSAA



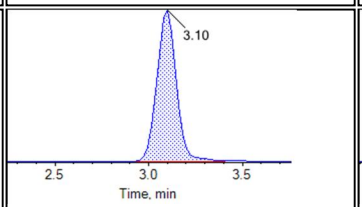
13C5-PFHxA



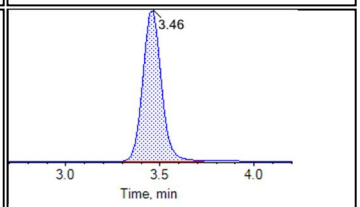
13C4-PFHpA



13C8-PFOA



13C9-PFNA

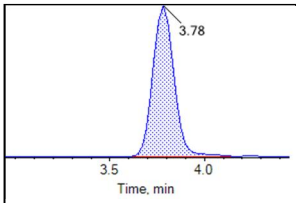


13C6-PFDA

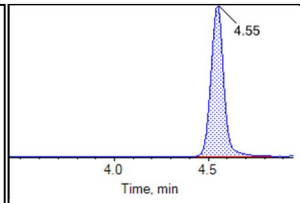
BATTELLE

Chromatogram Report

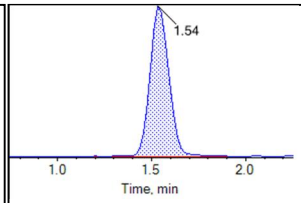
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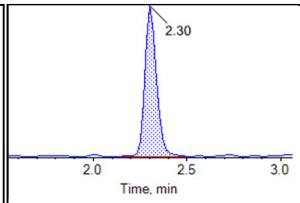
13C7-PFUnA



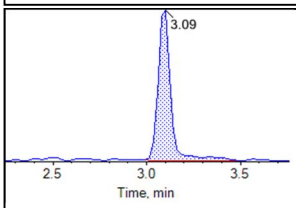
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

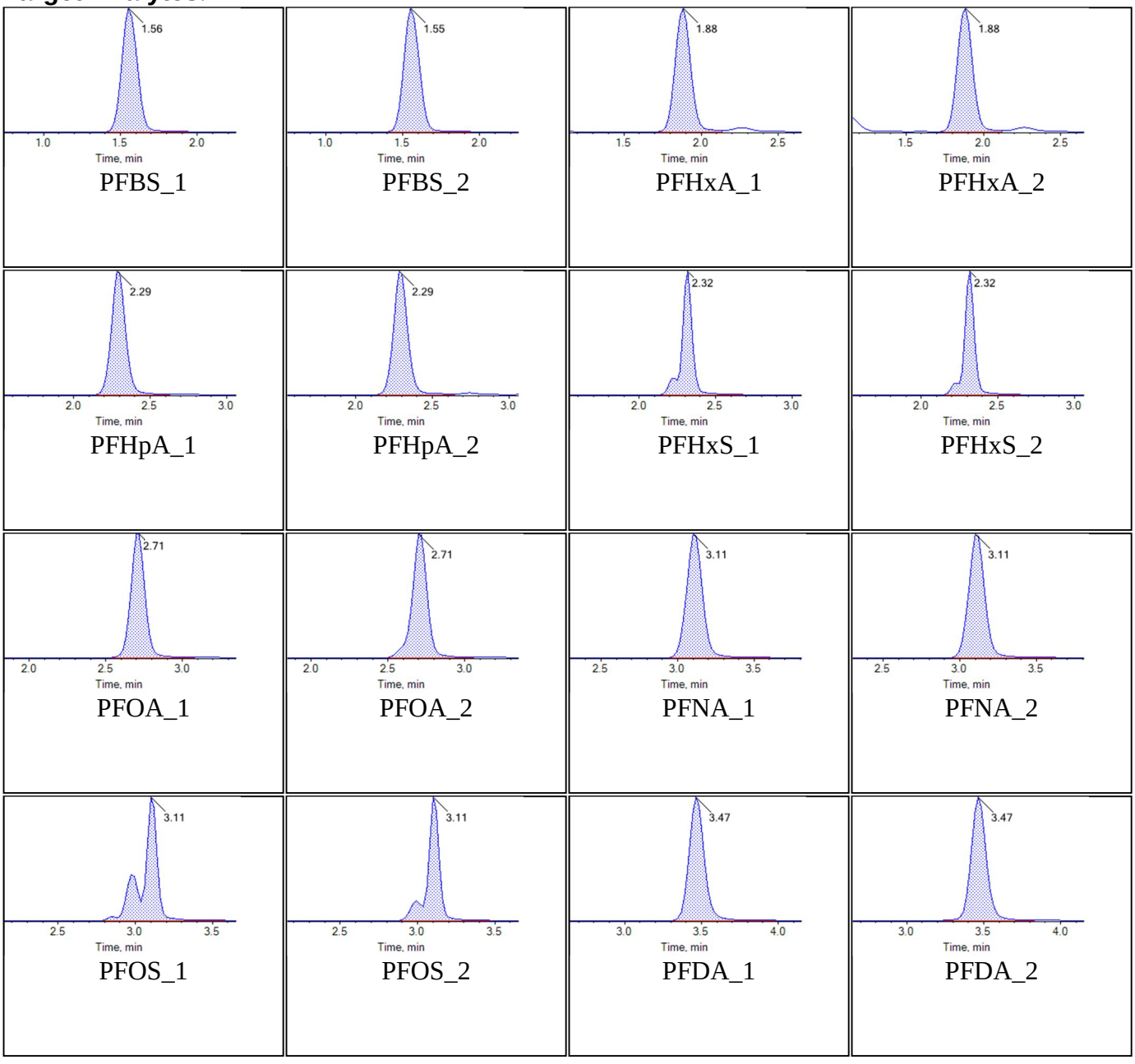
Chromatogram Report

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Printed: 09/10/2018 2:24:51 PM

Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:45:19	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

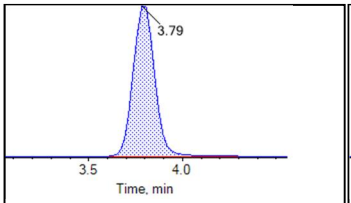
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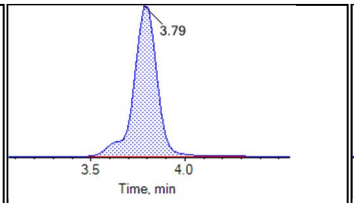
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Chromatogram Report

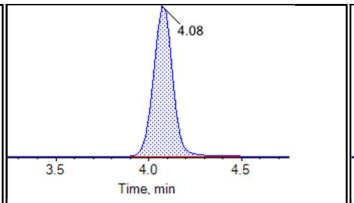
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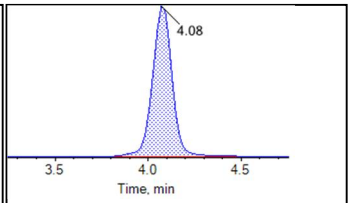
PFUnA_1



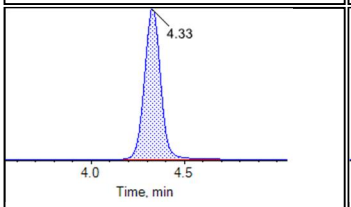
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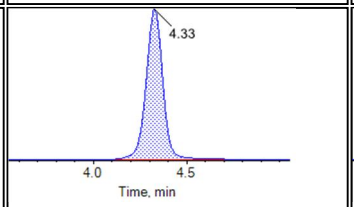
PFDoA_1



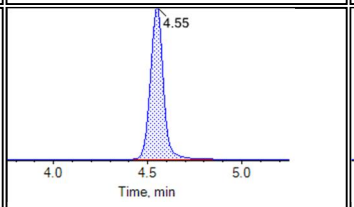
PFDoA_2



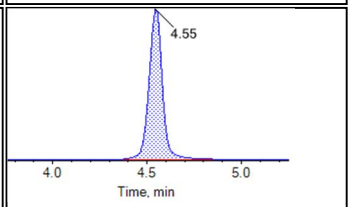
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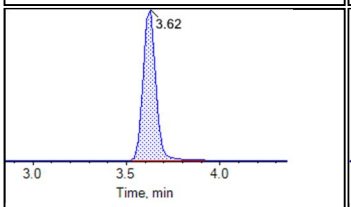
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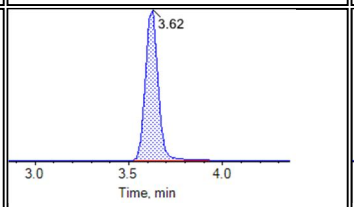
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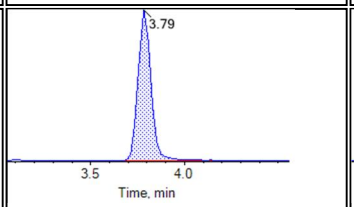
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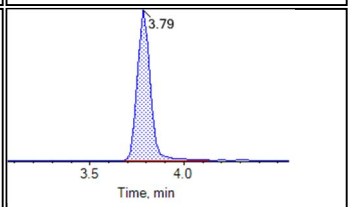
NMeFOSAA_1



NMeFOSAA_2

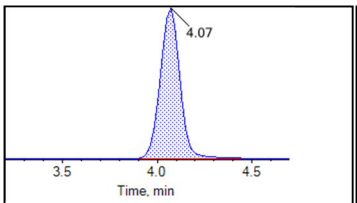


NEtFOSAA_1

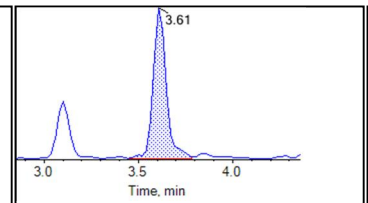


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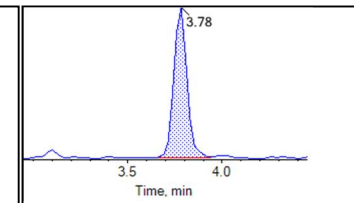
Internal Standards:



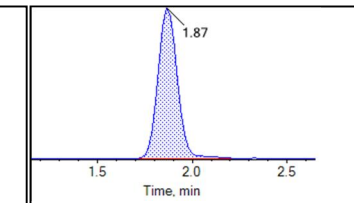
13C2-PFDoA



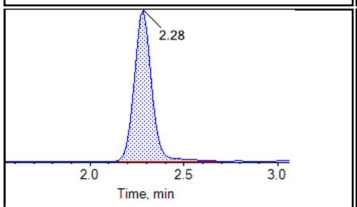
d3-MeFOSAA



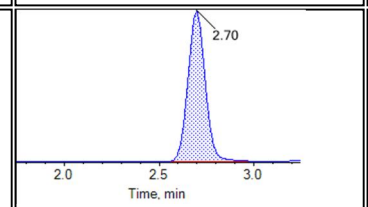
d5-EtFOSAA



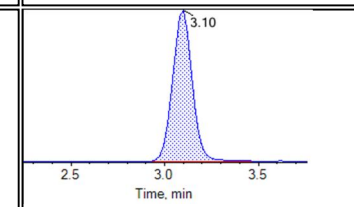
13C5-PFHxA



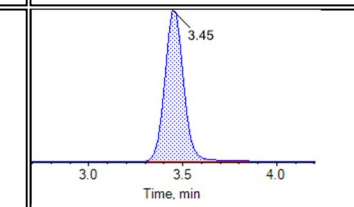
13C4-PFHpA



13C8-PFOA



13C9-PFNA

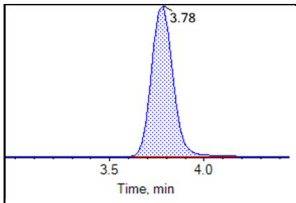


13C6-PFDA

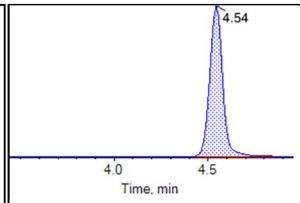
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Chromatogram Report

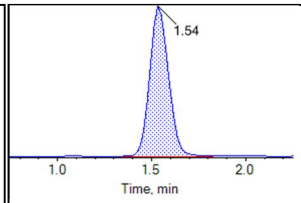
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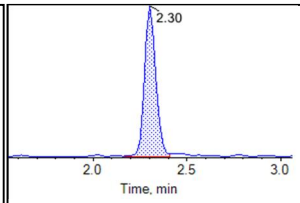
13C7-PFUnA



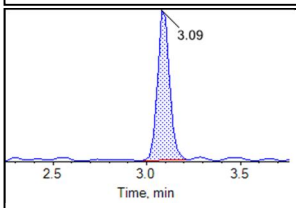
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

BATTELLE

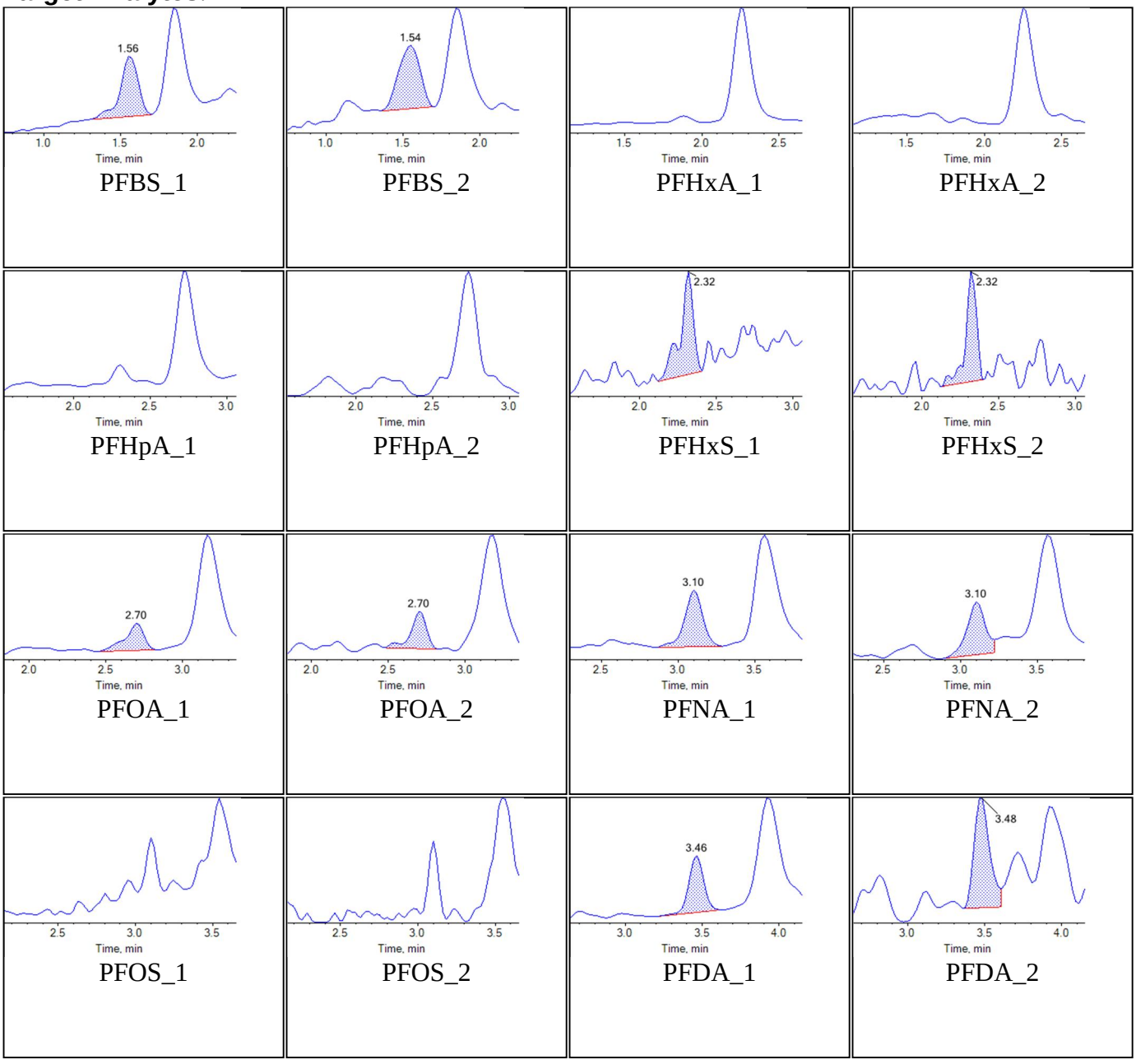
Chromatogram Report

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Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:56:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_BASE
Sample Comment			

Chromatograms

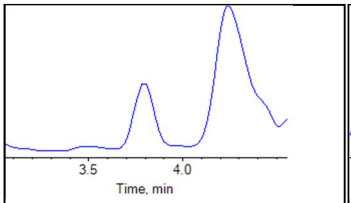
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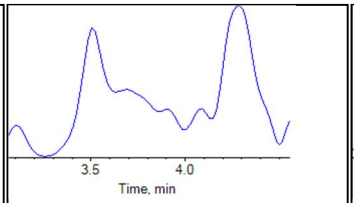
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Chromatogram Report

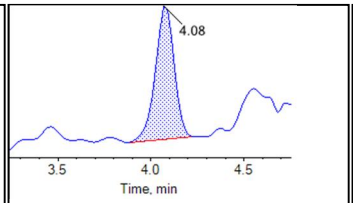
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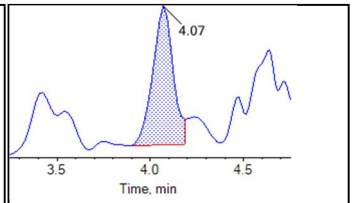
PFUnA_1



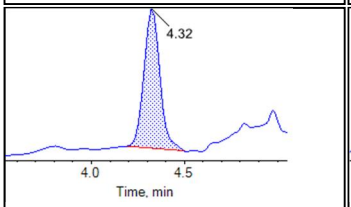
PFUnA_2



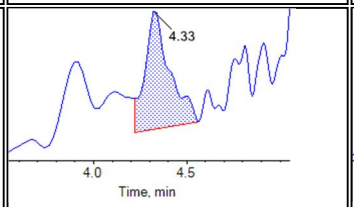
PFDoA_1



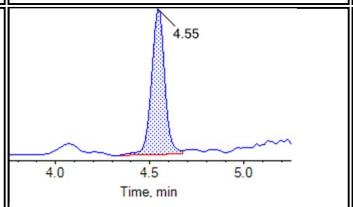
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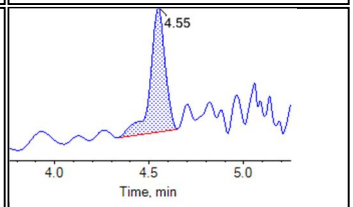
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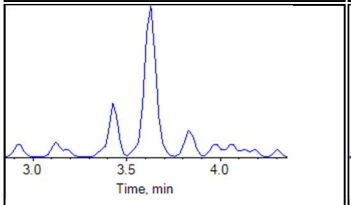
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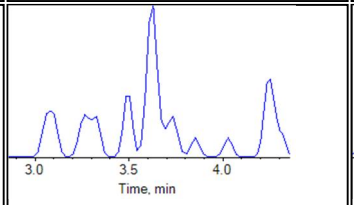
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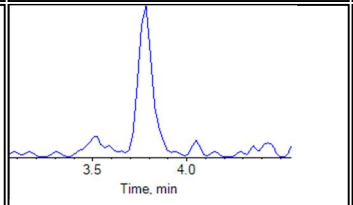
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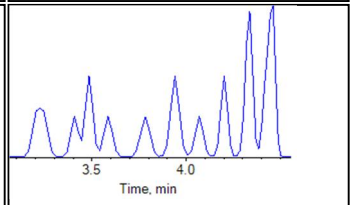
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NMeFOSAA_2

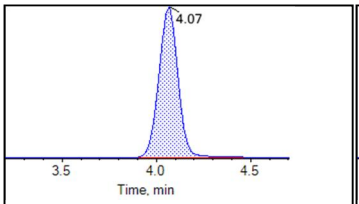


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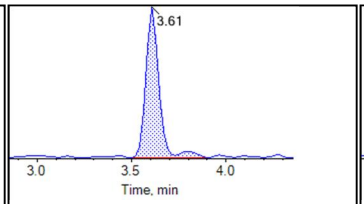


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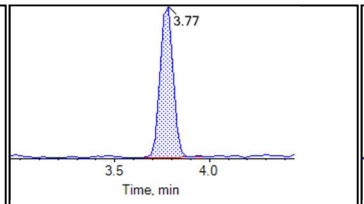
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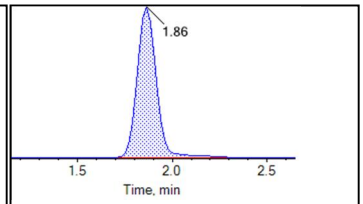
13C2-PFDoA



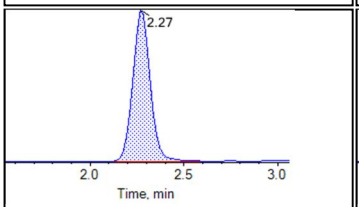
d3-MeFOSAA



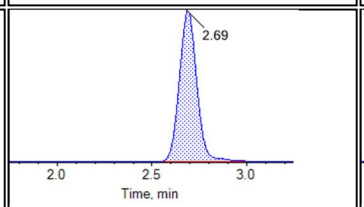
d5-EtFOSAA



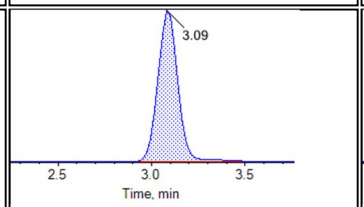
13C5-PFHxA



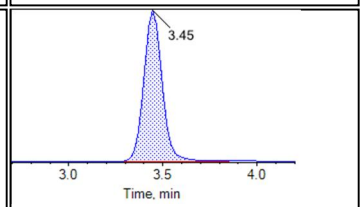
13C4-PFHpA



13C8-PFOA



13C9-PFNA

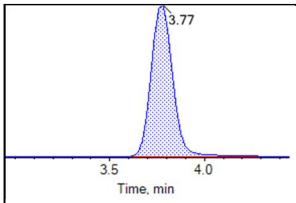


13C6-PFDA

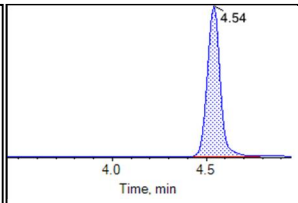
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Chromatogram Report

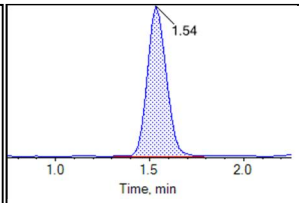
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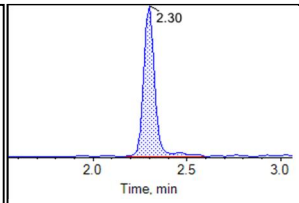
13C7-PFUnA



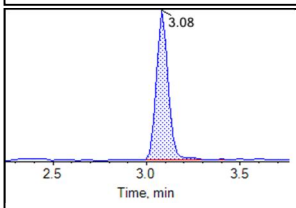
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



13C8-PFOS

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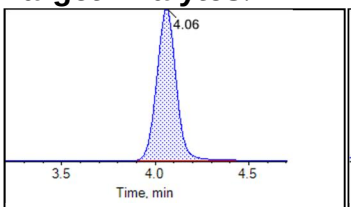
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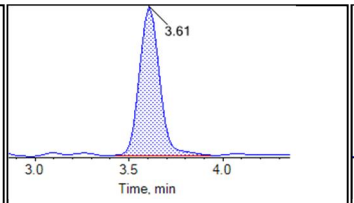
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Sample ID	ICC	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T17:07:01	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

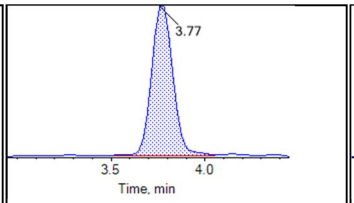
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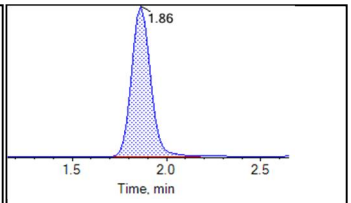
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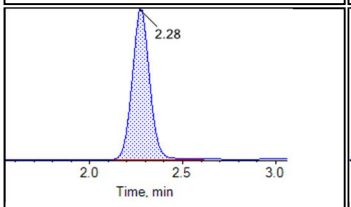
d3-MeFOSAA



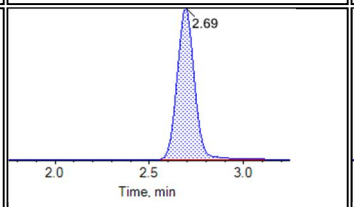
d5-EtFOSAA



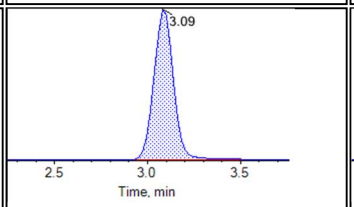
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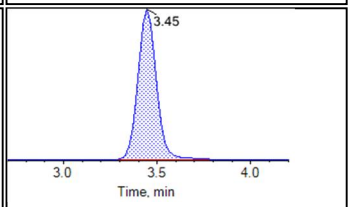
13C4-PFHpA



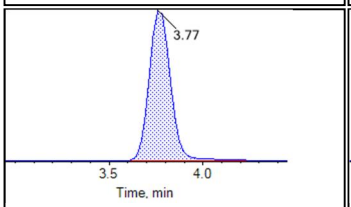
13C8-PFOA



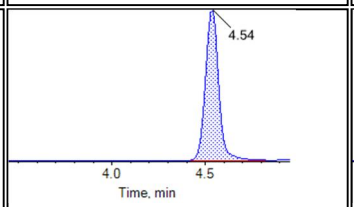
13C9-PFNA



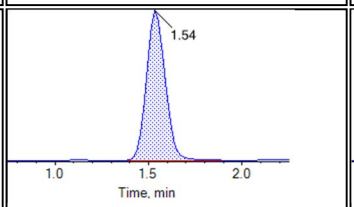
13C6-PFDA



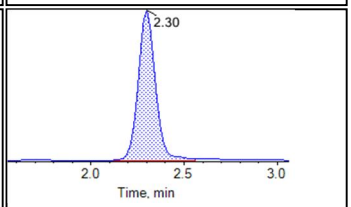
13C7-PFUnA



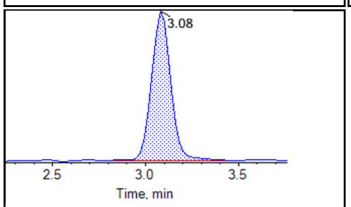
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



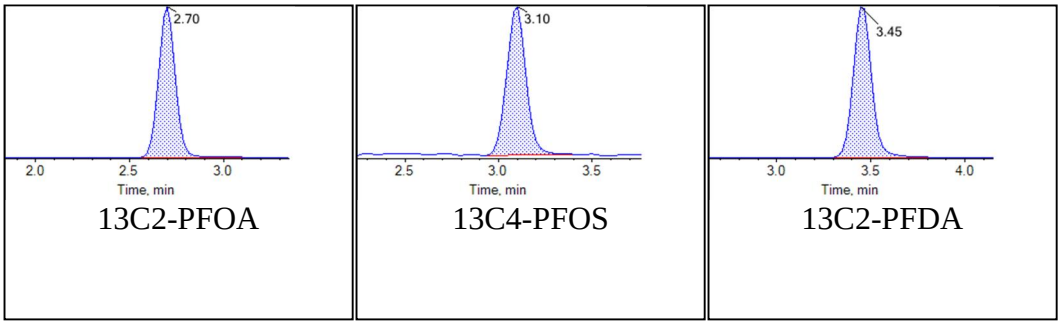
13C8-PFOS

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Internal Standards:



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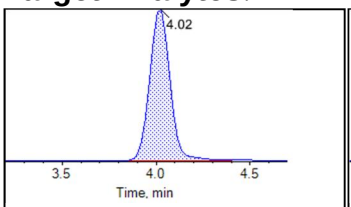
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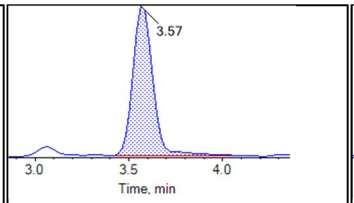
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Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T21:27:45	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

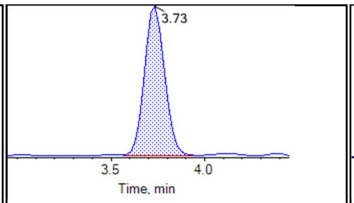
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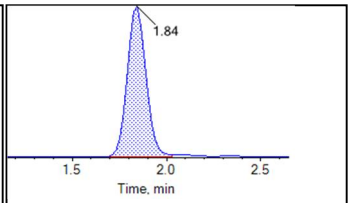
13C2-PFDoA



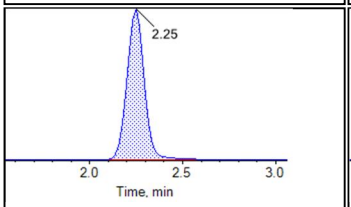
d3-MeFOSAA



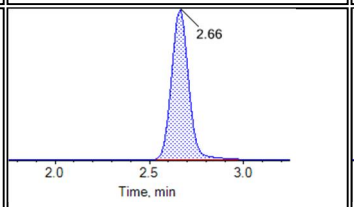
d5-EtFOSAA



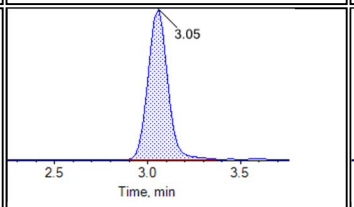
13C5-PFHxA



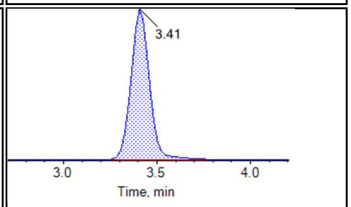
13C4-PFHpA



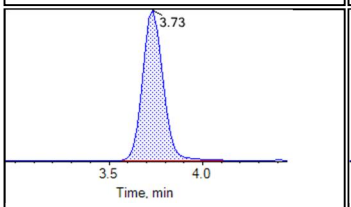
13C8-PFOA



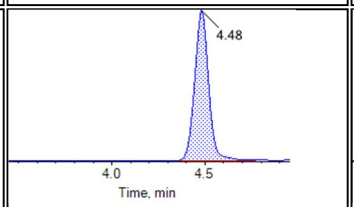
13C9-PFNA



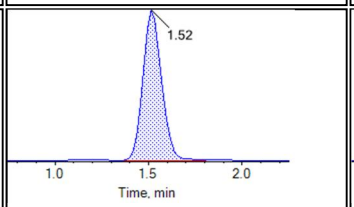
13C6-PFDA



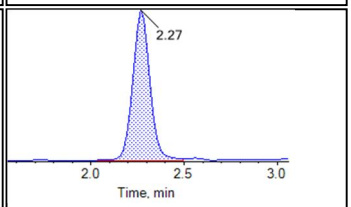
13C7-PFUnA



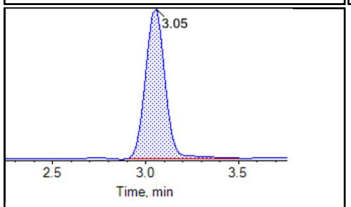
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

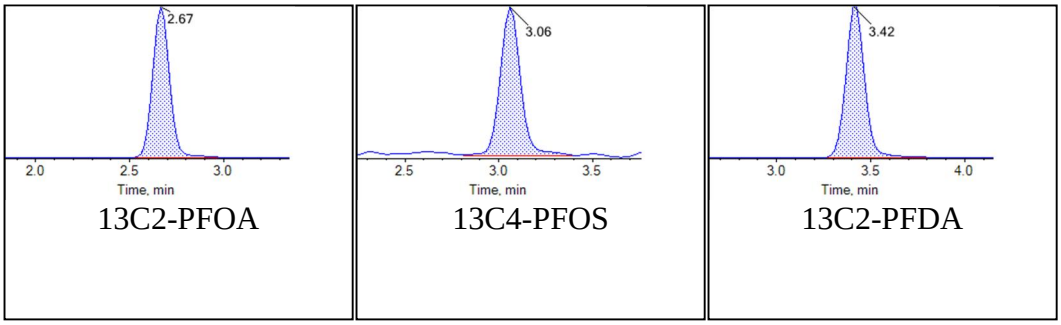


13C8-PFOS

Chromatogram Report

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Internal Standards:



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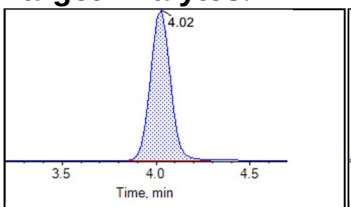
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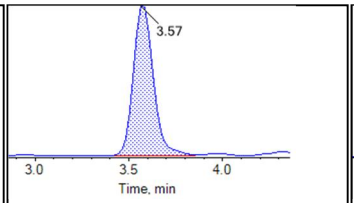
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Sample ID	Procedural Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
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Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

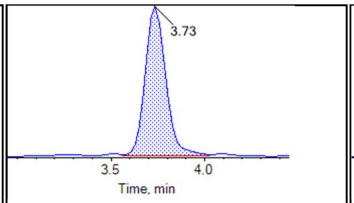
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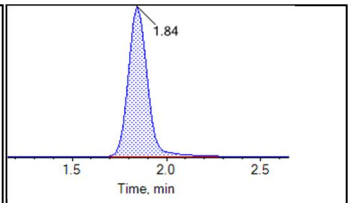
13C2-PFDoA



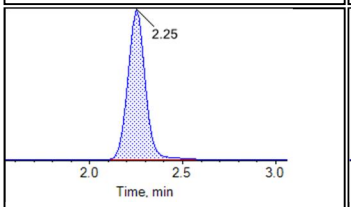
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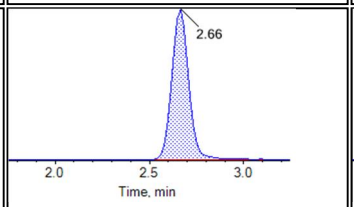
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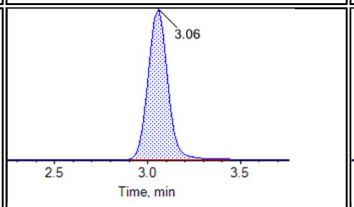
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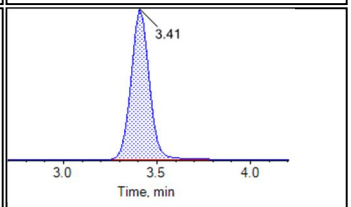
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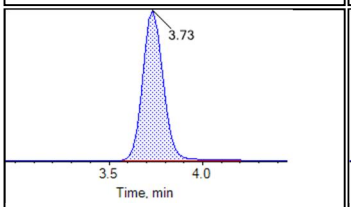
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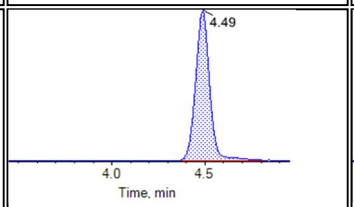
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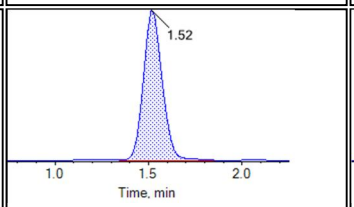
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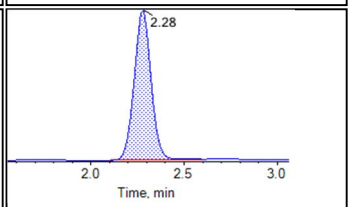
13C7-PFUnA



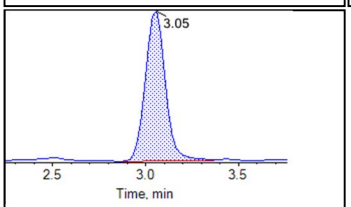
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



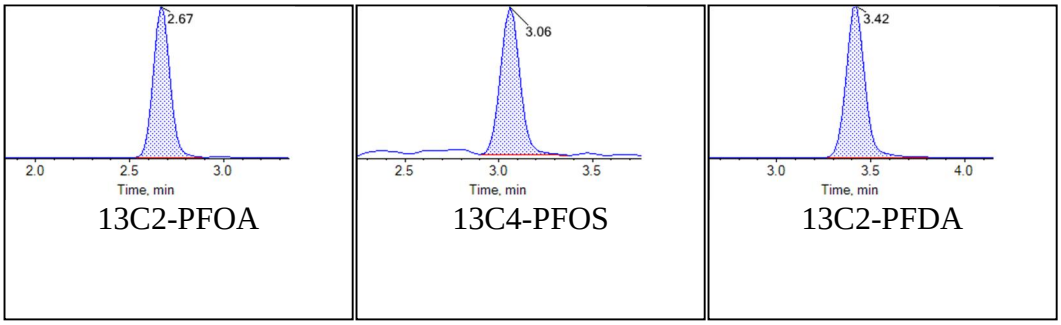
13C8-PFOS

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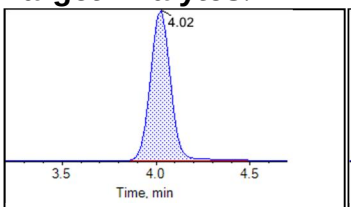
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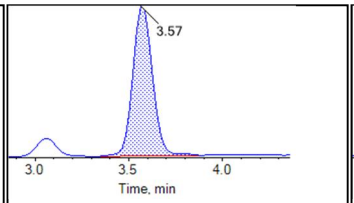
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Sample ID	Laboratory Control Sample	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:00:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

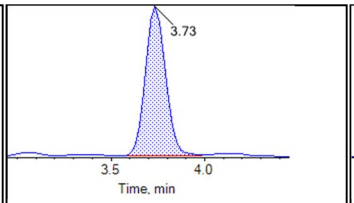
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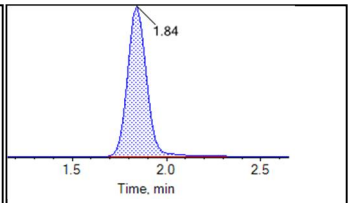
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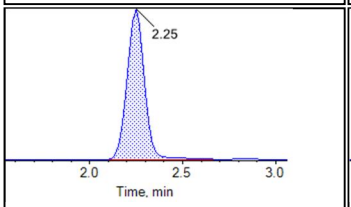
d3-MeFOSAA



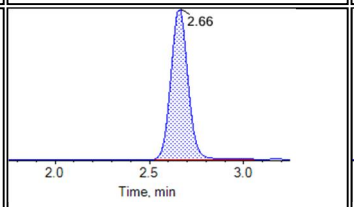
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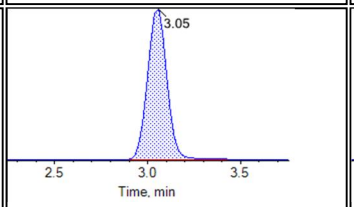
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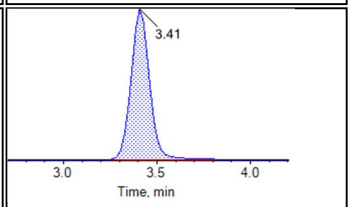
13C4-PFHpA



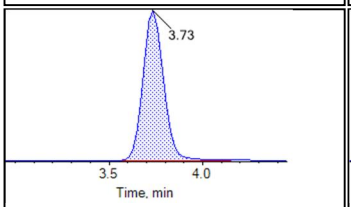
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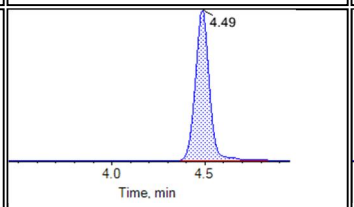
13C9-PFNA



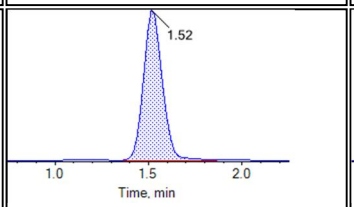
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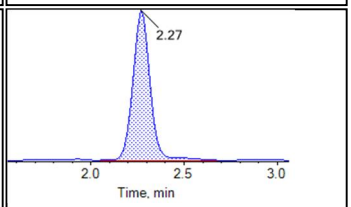
13C7-PFUnA



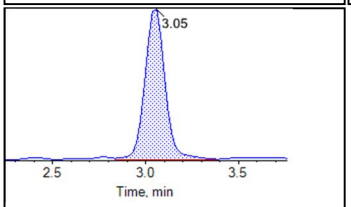
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



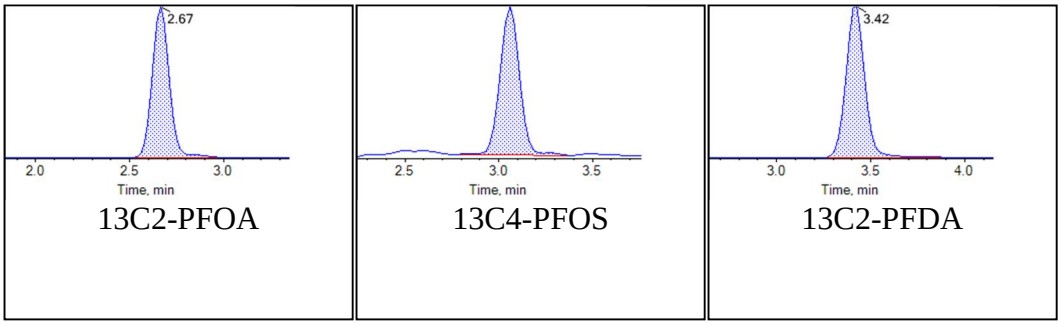
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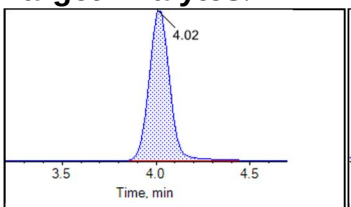
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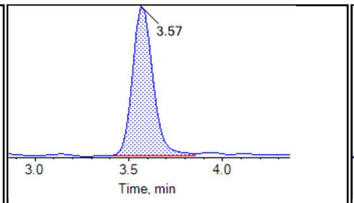
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Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:11:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

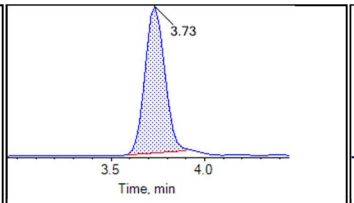
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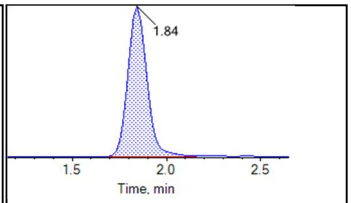
13C2-PFDoA



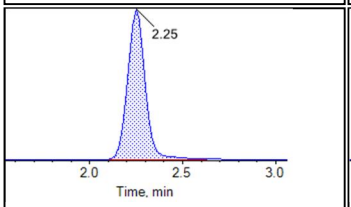
d3-MeFOSAA



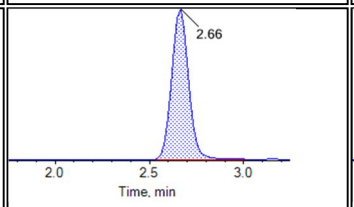
d5-EtFOSAA



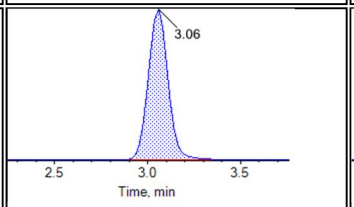
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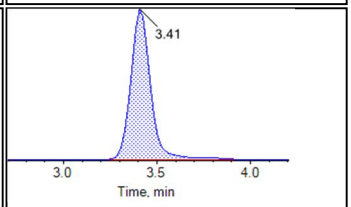
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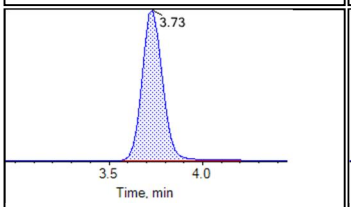
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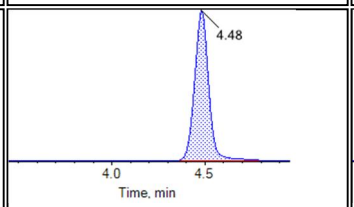
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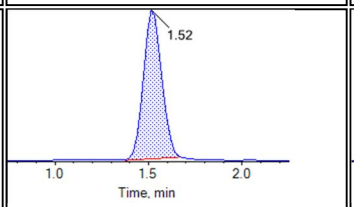
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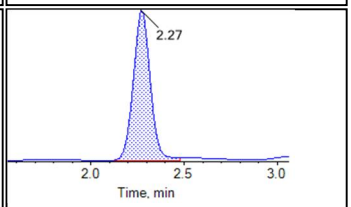
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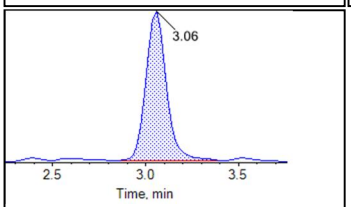
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



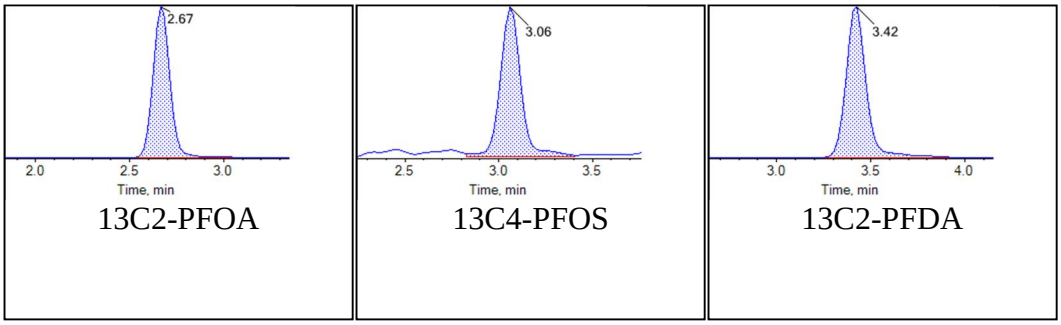
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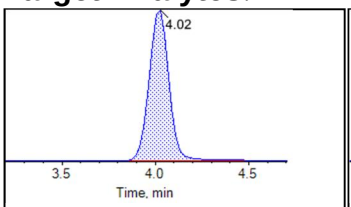
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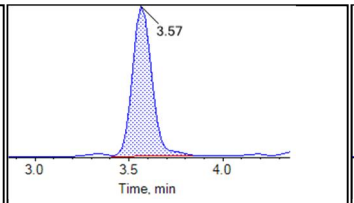
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Sample ID	VC-PM323-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:22:03	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

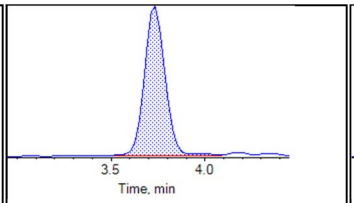
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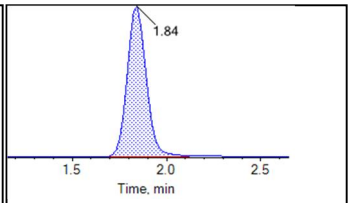
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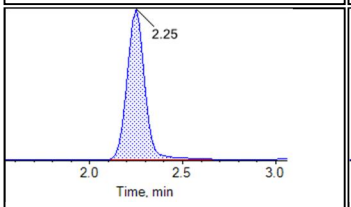
d3-MeFOSAA



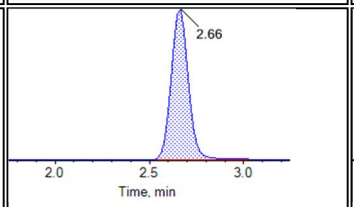
d5-EtFOSAA



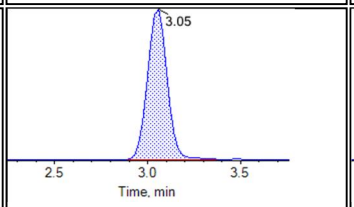
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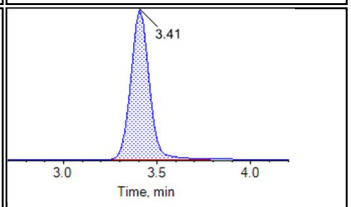
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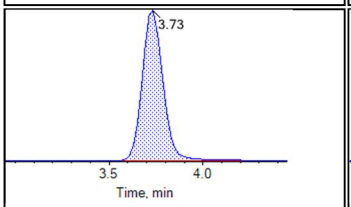
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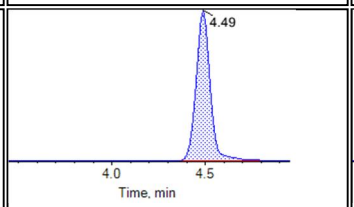
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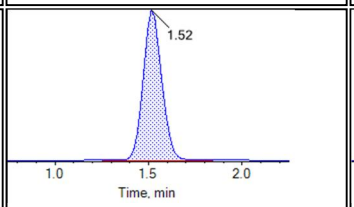
13C6-PFDA



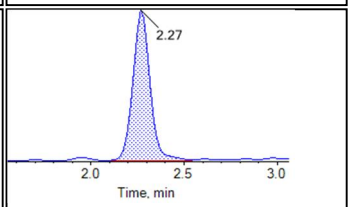
13C7-PFUnA



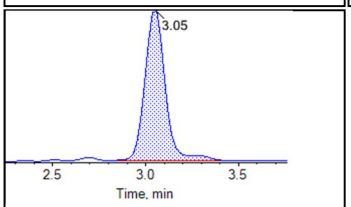
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

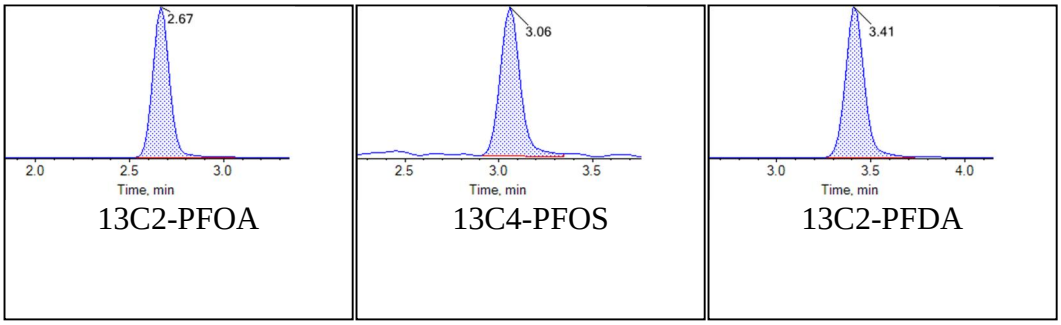


13C8-PFOS

Chromatogram Report

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Internal Standards:



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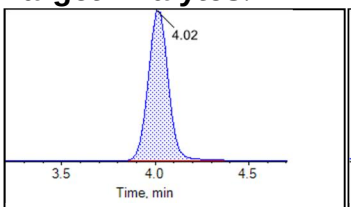
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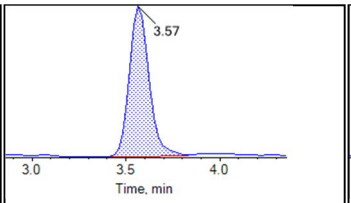
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Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:32:55	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

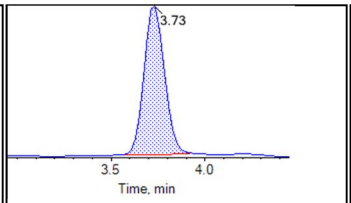
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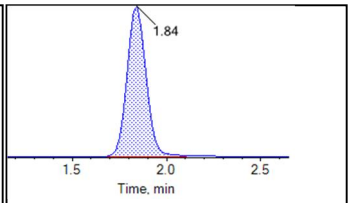
13C2-PFDoA



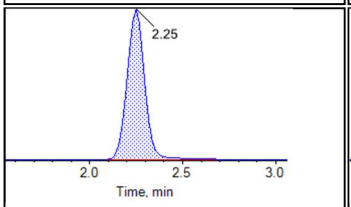
d3-MeFOSAA



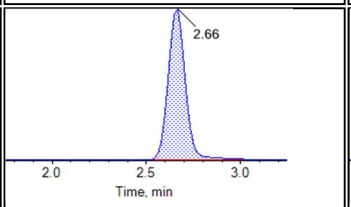
d5-EtFOSAA



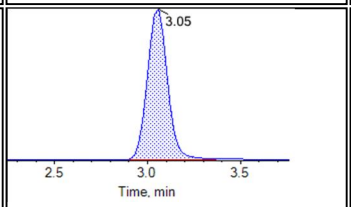
13C5-PFHxA



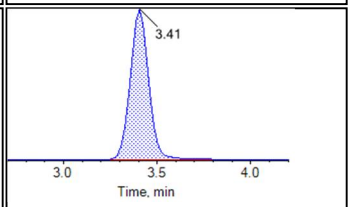
13C4-PFHpA



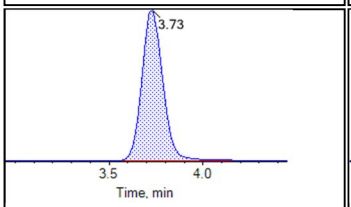
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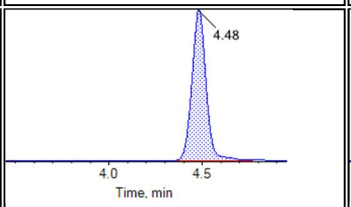
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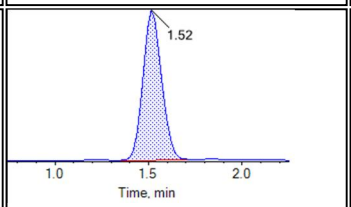
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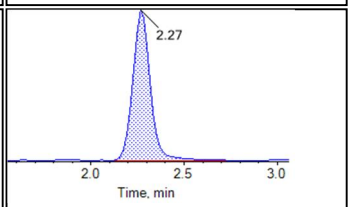
13C7-PFUnA



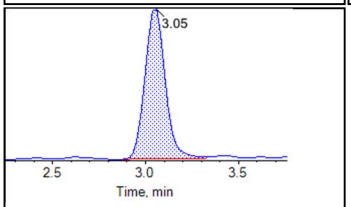
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



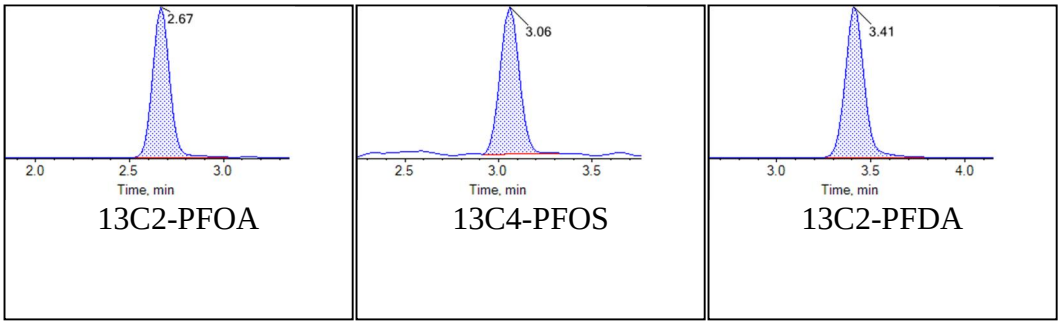
13C8-PFOS

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Internal Standards:



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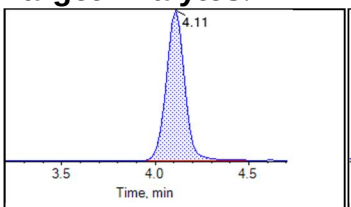
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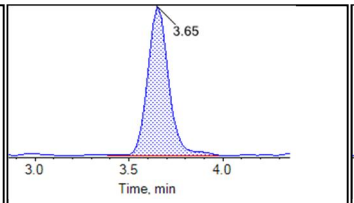
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Sample ID	L1	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T15:40:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

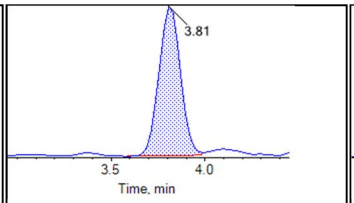
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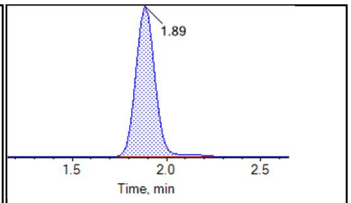
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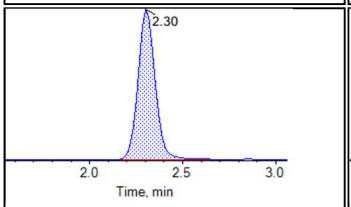
d3-MeFOSAA



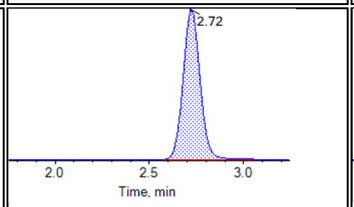
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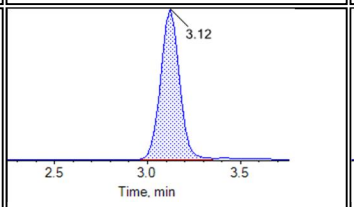
13C5-PFHxA



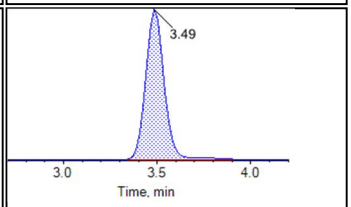
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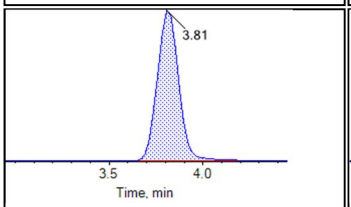
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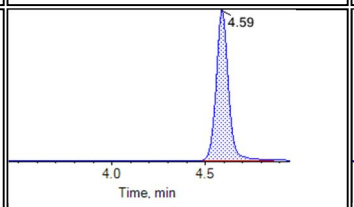
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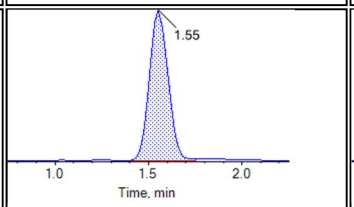
13C6-PFDA



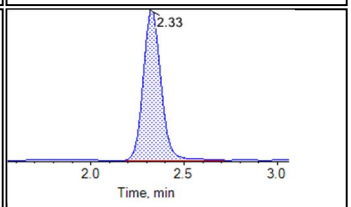
13C7-PFUnA



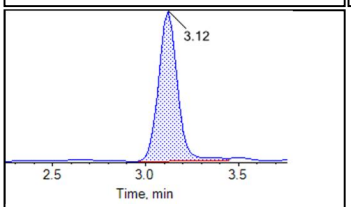
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



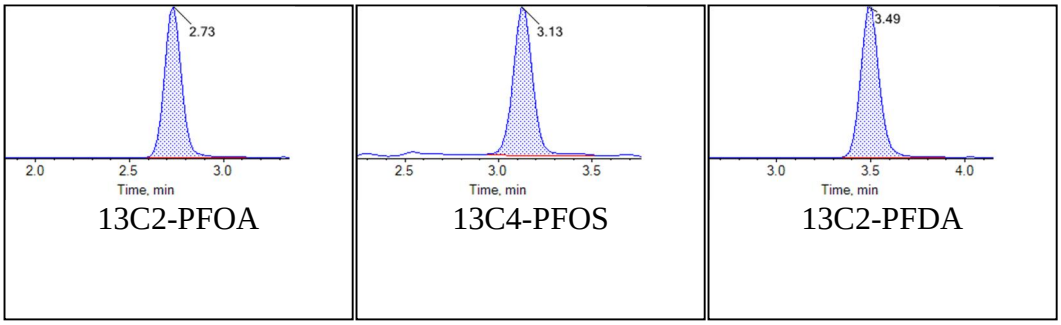
13C8-PFOS

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Internal Standards:



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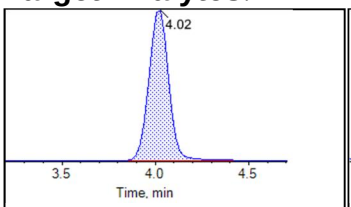
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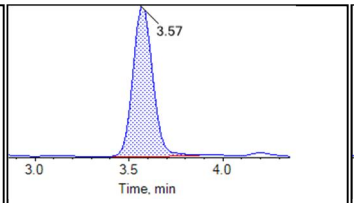
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Sample ID	VC-PM323-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:43:46	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

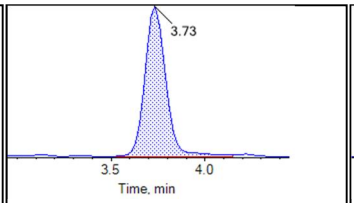
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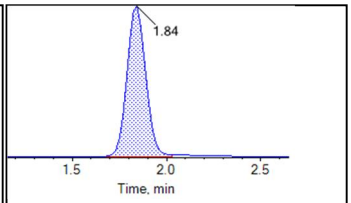
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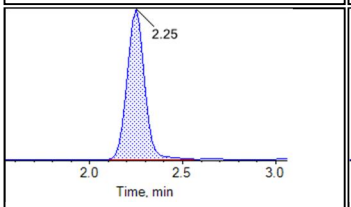
d3-MeFOSAA



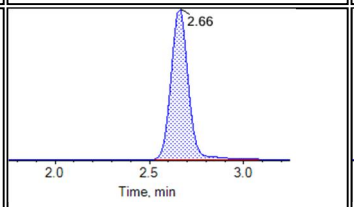
d5-EtFOSAA



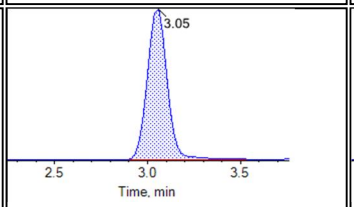
13C5-PFHxA



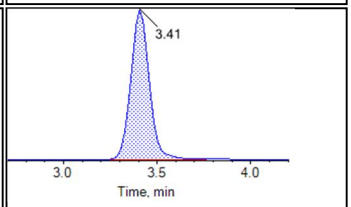
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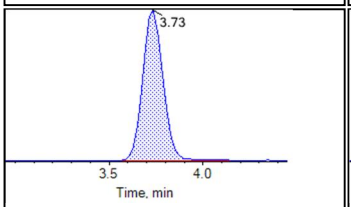
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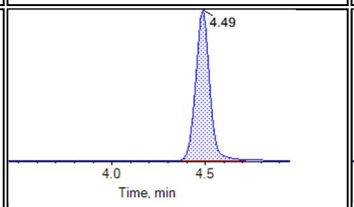
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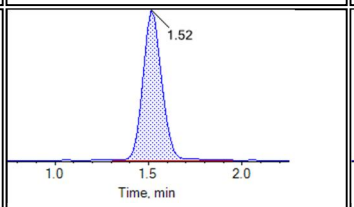
13C6-PFDA



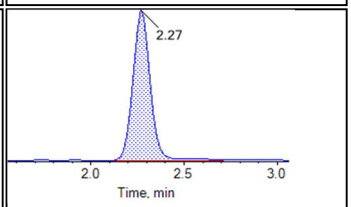
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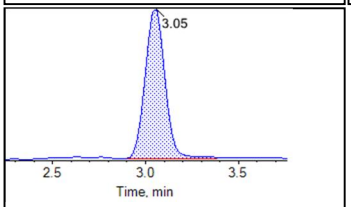
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

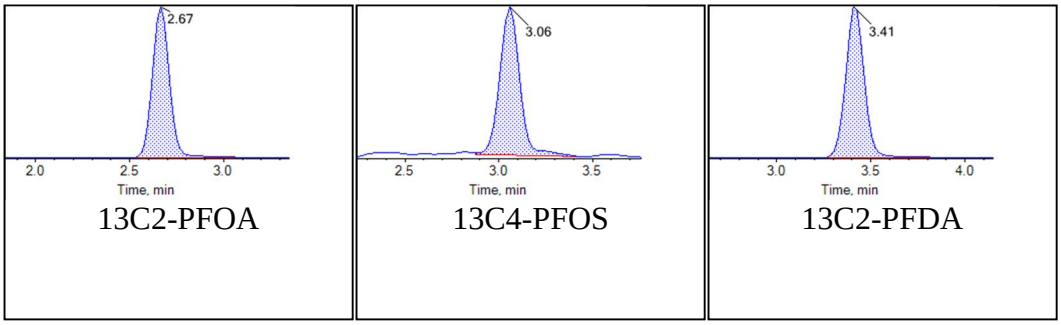


13C8-PFOS

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Internal Standards:



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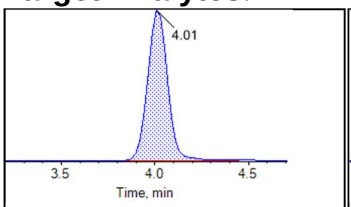
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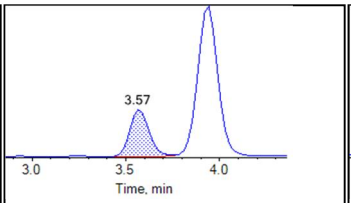
Sample Name	J8354-FS(3)	**Injection Vial**	33
Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T22:54:37	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

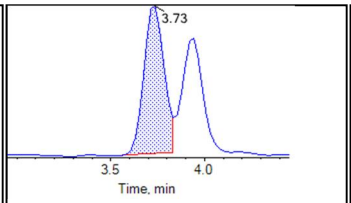
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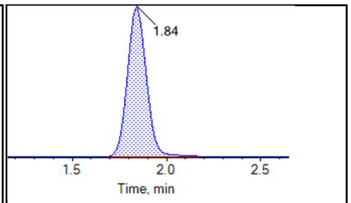
13C2-PFDoA



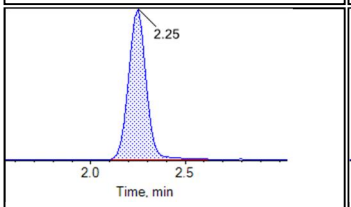
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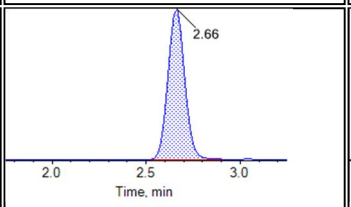
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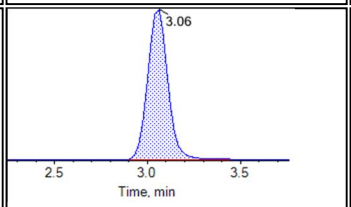
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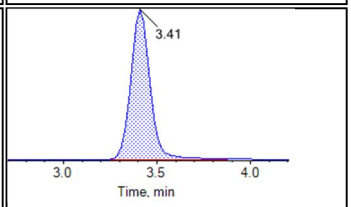
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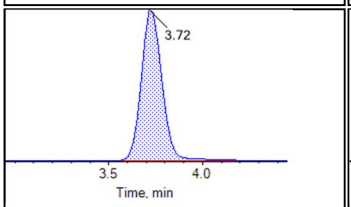
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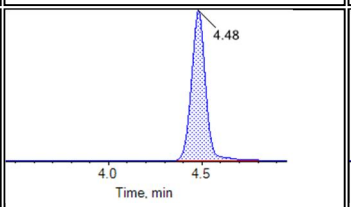
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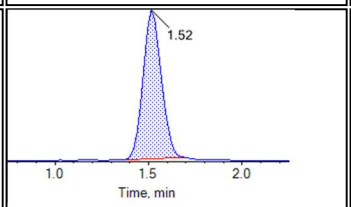
13C6-PFDA



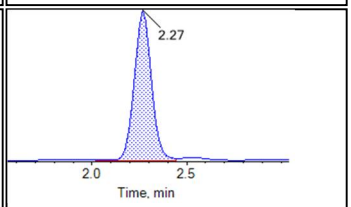
13C7-PFUnA



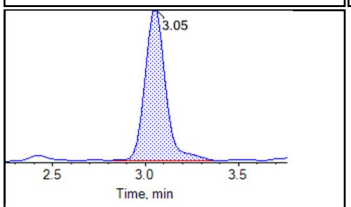
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



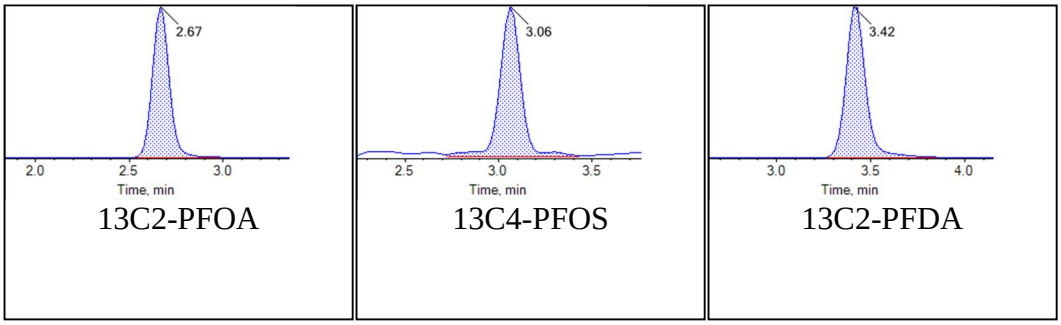
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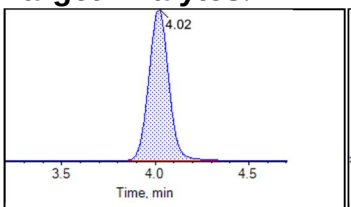
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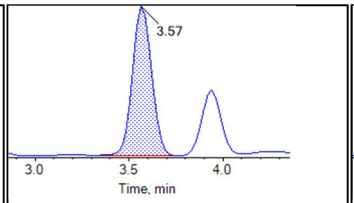
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Sample ID	VC-PM323-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:05:28	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

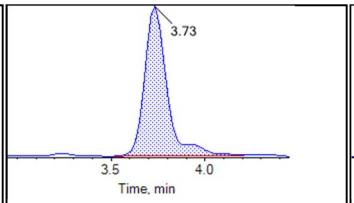
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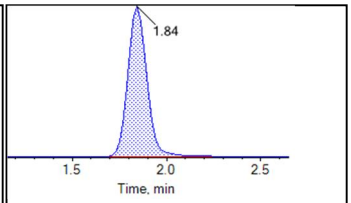
13C2-PFDoA



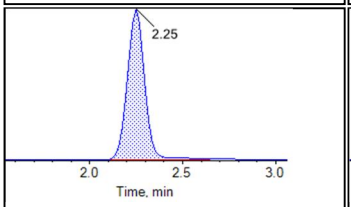
d3-MeFOSAA



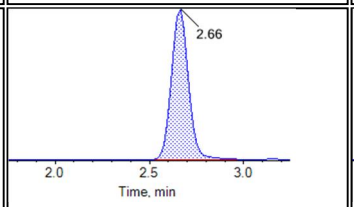
d5-EtFOSAA



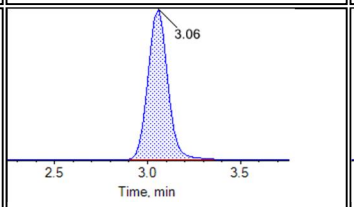
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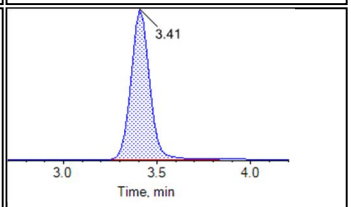
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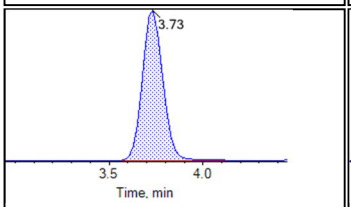
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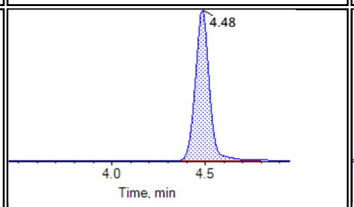
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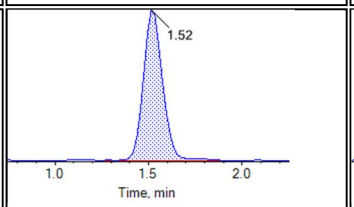
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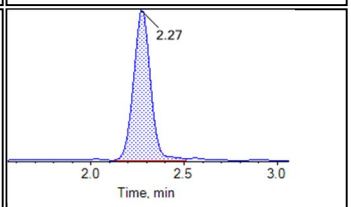
13C7-PFUnA



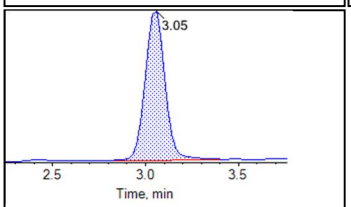
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



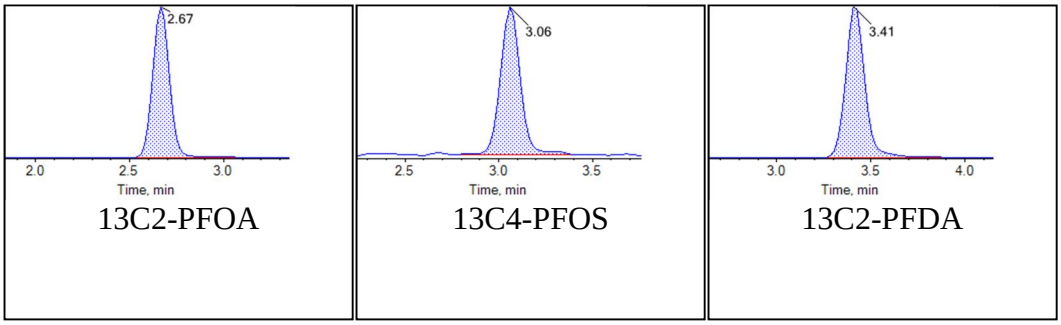
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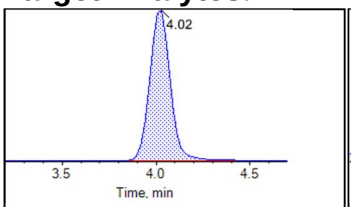
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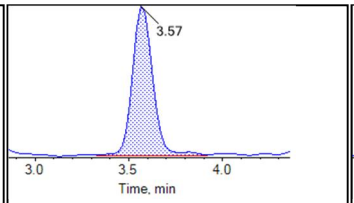
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Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:16:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

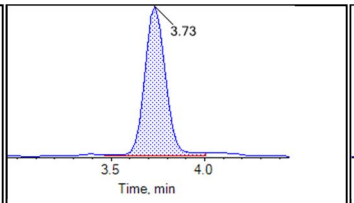
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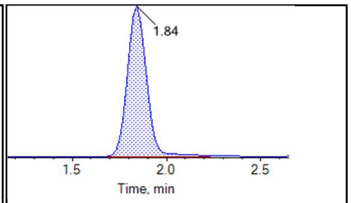
13C2-PFDoA



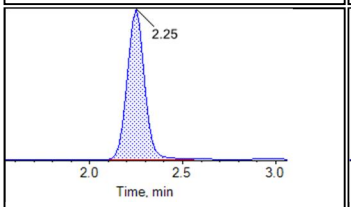
d3-MeFOSAA



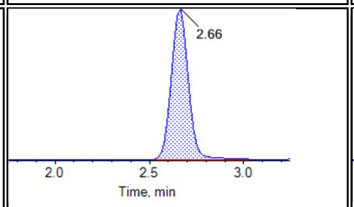
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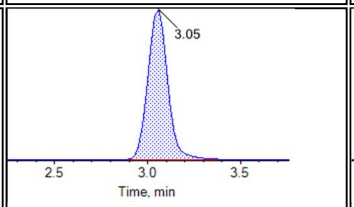
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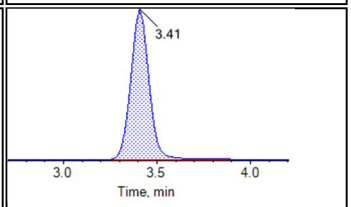
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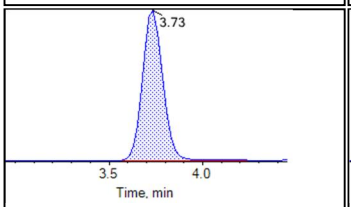
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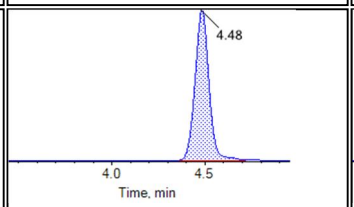
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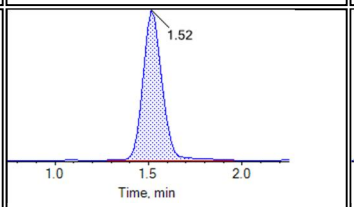
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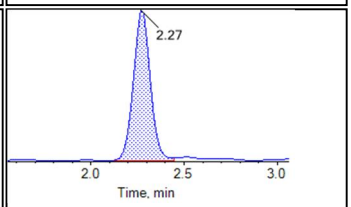
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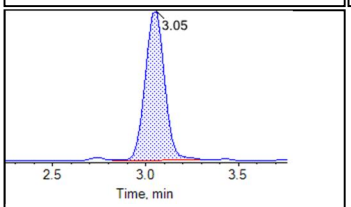
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



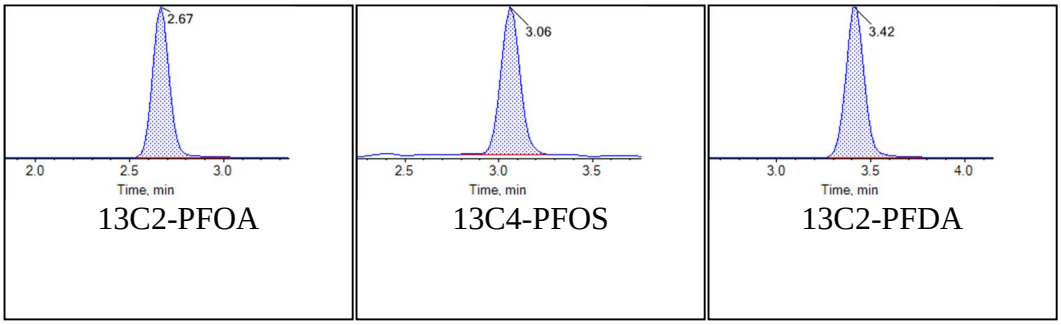
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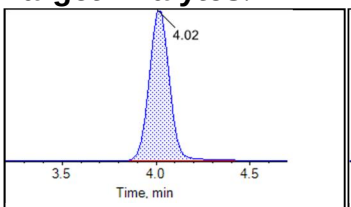
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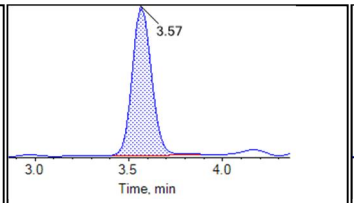
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Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:27:10	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

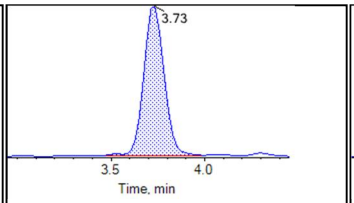
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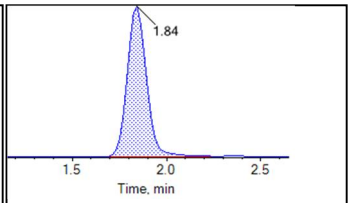
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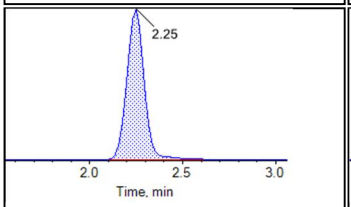
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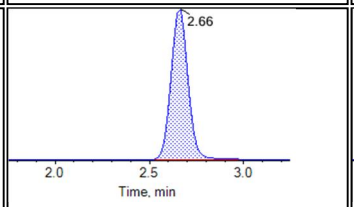
d5-EtFOSAA



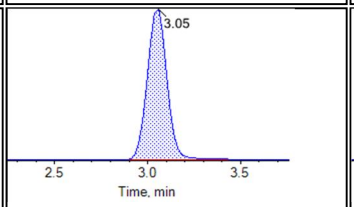
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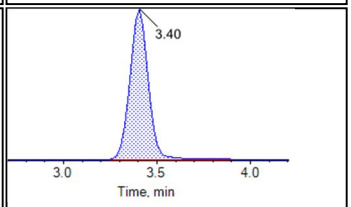
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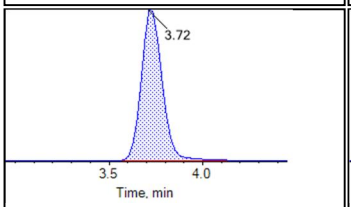
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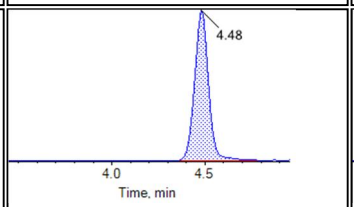
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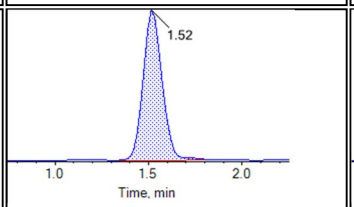
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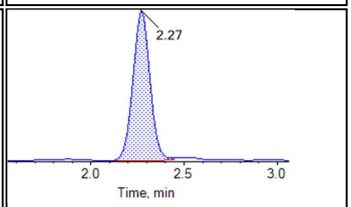
13C7-PFUnA



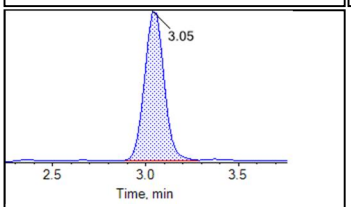
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

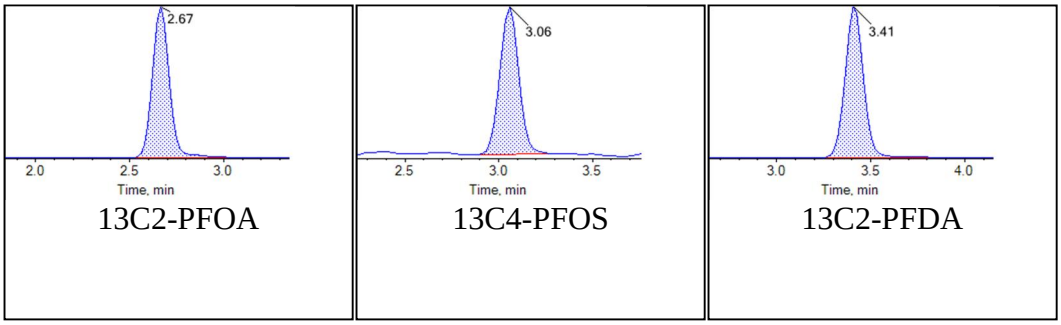


13C8-PFOS

Chromatogram Report

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Internal Standards:



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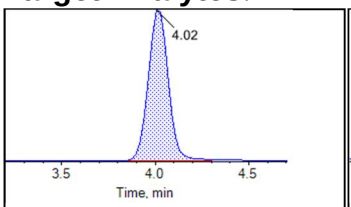
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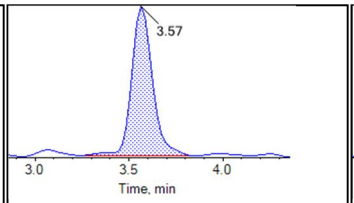
Sample Name	KB76 CCV	**Injection Vial**	37
Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:38:01	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

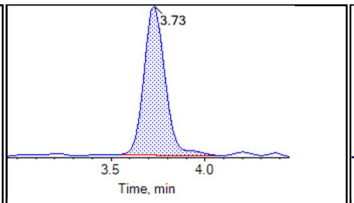
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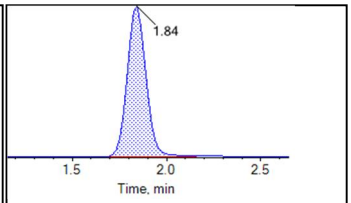
13C2-PFDoA



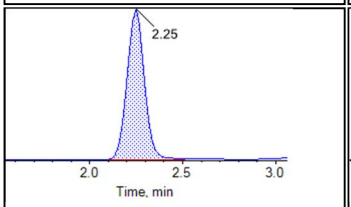
d3-MeFOSAA



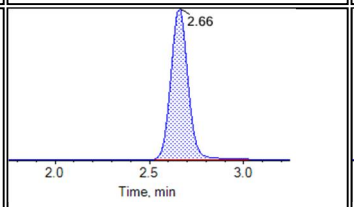
d5-EtFOSAA



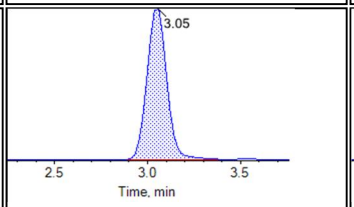
13C5-PFHxA



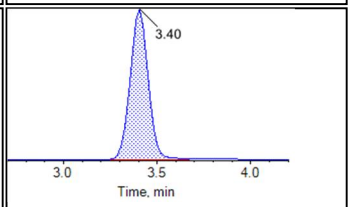
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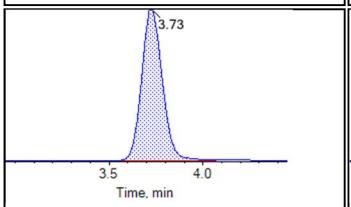
13C8-PFOA



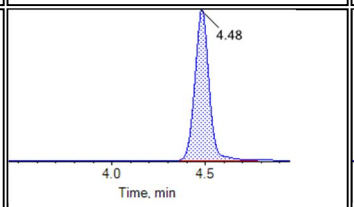
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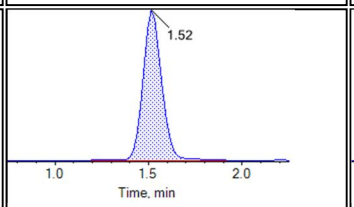
13C6-PFDA



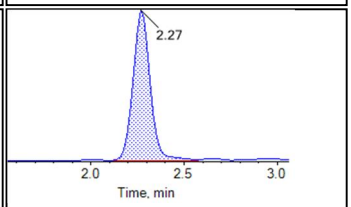
13C7-PFUnA



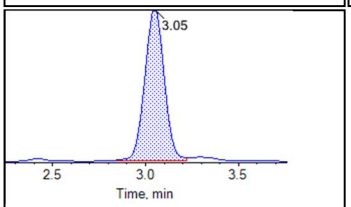
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



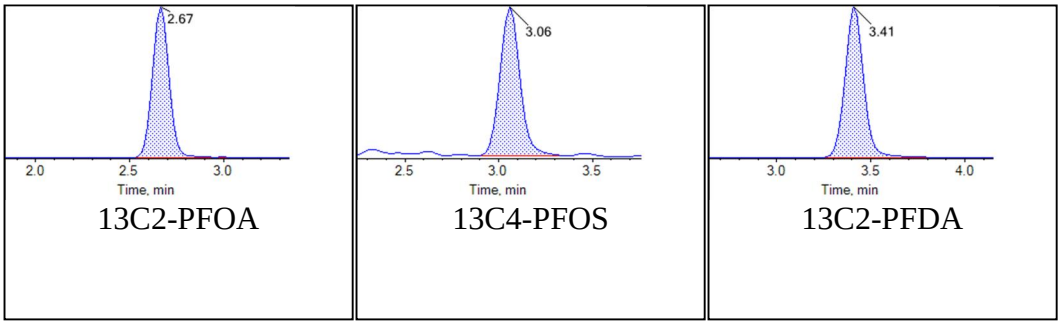
13C8-PFOS

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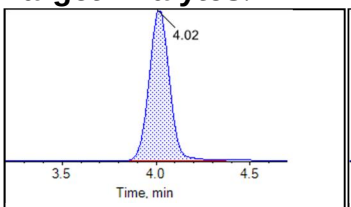
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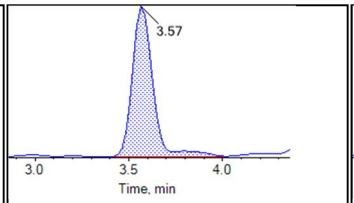
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Sample ID	VC-PM323-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T23:59:44	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

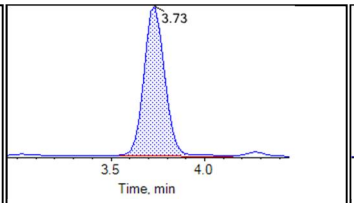
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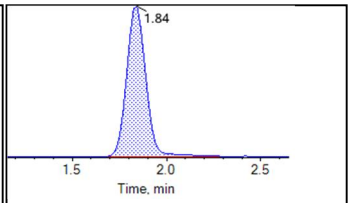
13C2-PFDoA



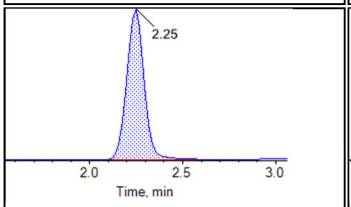
d3-MeFOSAA



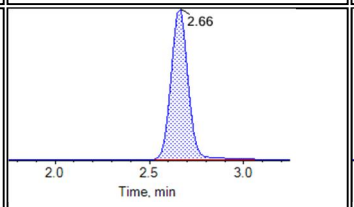
d5-EtFOSAA



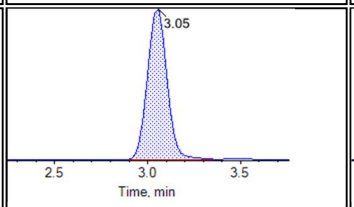
13C5-PFHxA



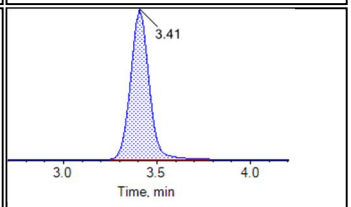
13C4-PFHpA



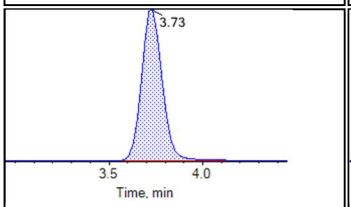
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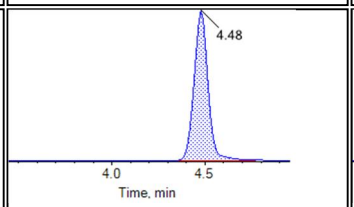
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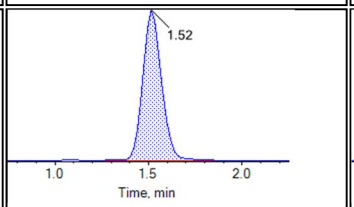
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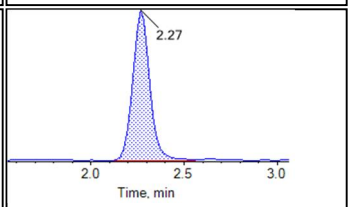
13C7-PFUnA



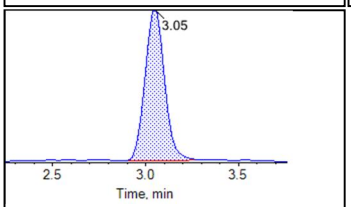
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



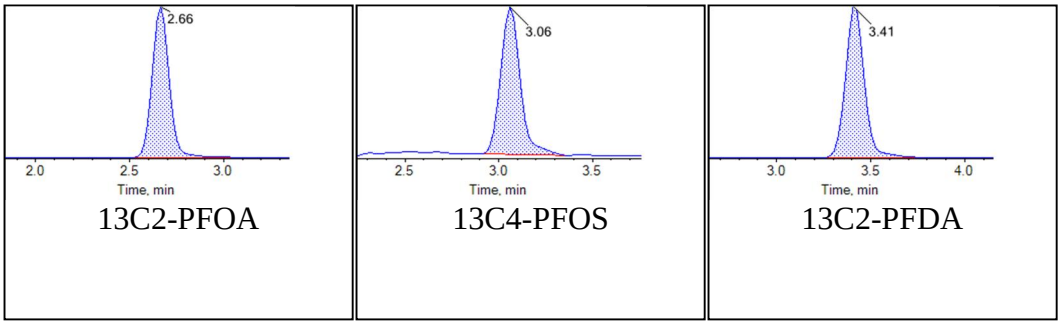
13C8-PFOS

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Internal Standards:



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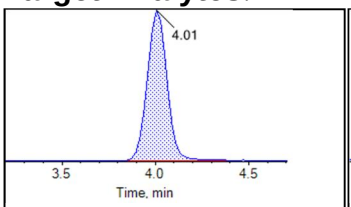
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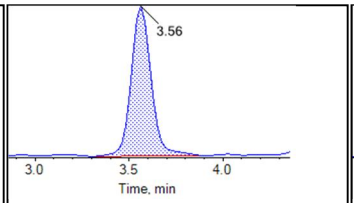
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Sample ID	VC-PM324-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:10:35	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

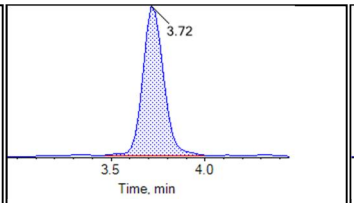
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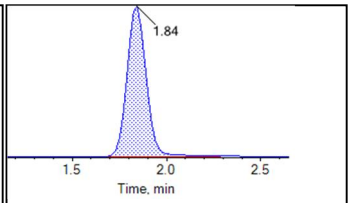
13C2-PFDoA



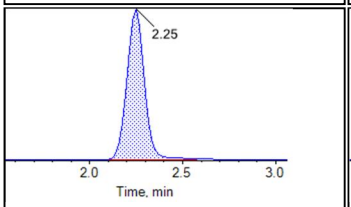
d3-MeFOSAA



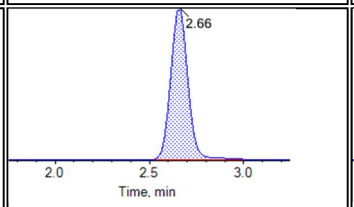
d5-EtFOSAA



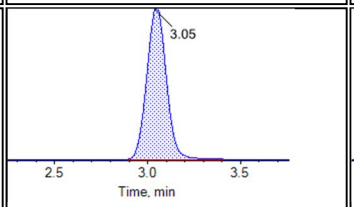
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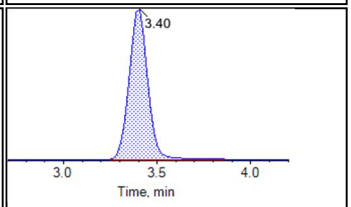
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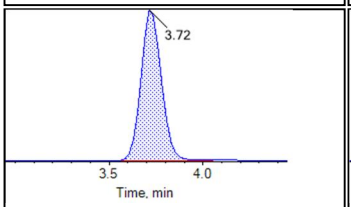
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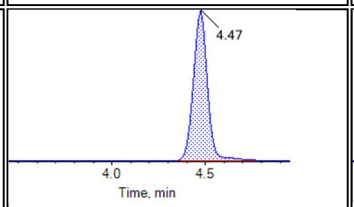
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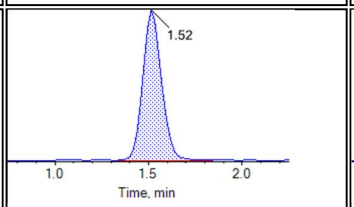
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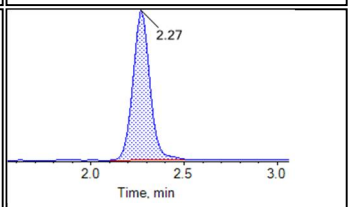
13C7-PFUnA



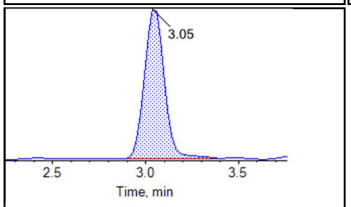
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



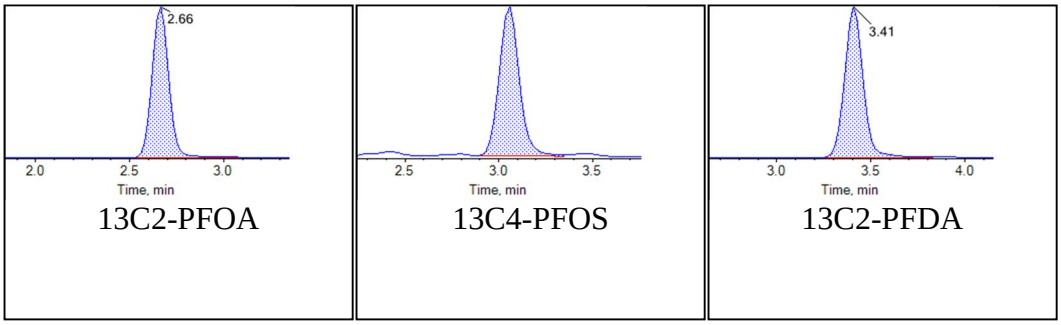
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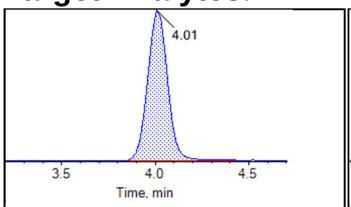
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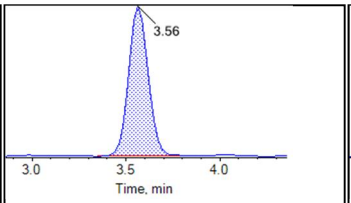
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Sample ID	VC-PM324-SB01-0102	**Injection Volume**	10.00
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Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

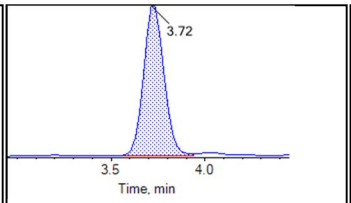
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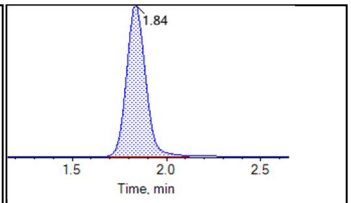
13C2-PFDoA



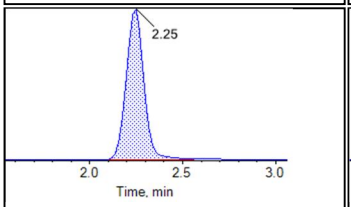
d3-MeFOSAA



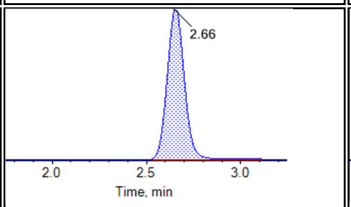
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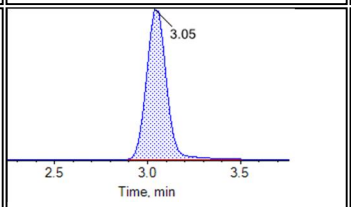
13C5-PFHxA



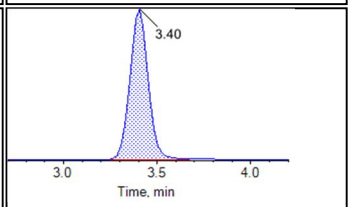
13C4-PFHpA



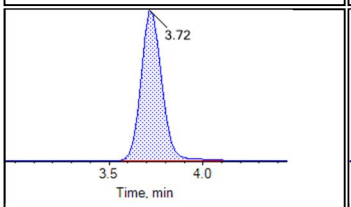
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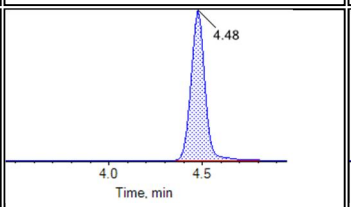
13C9-PFNA



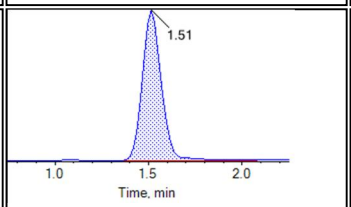
13C6-PFDA



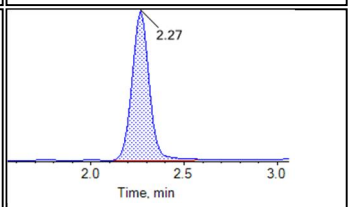
13C7-PFUnA



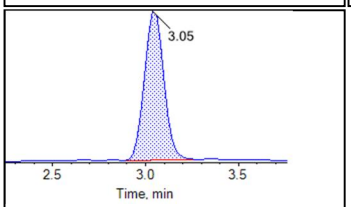
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



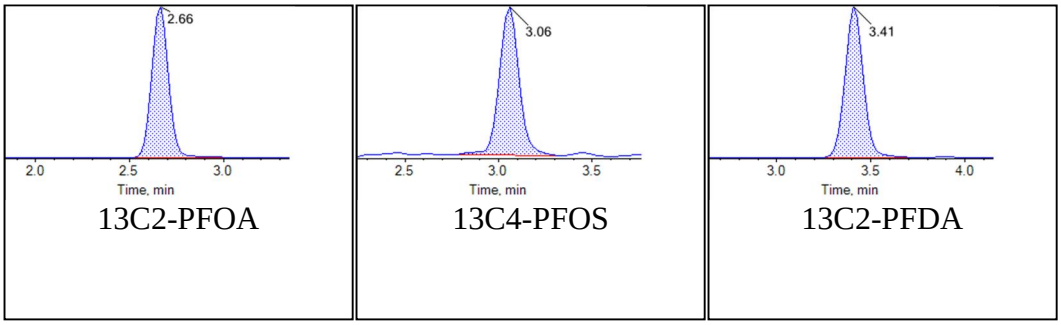
13C8-PFOS

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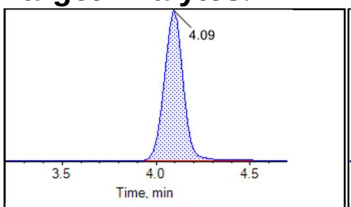
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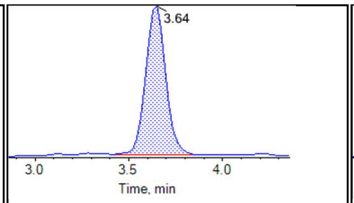
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Sample ID	L2	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T15:51:02	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

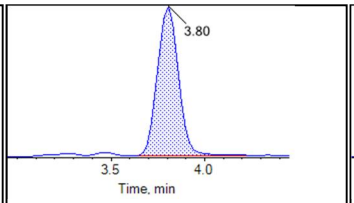
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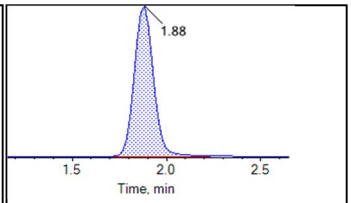
13C2-PFDoA



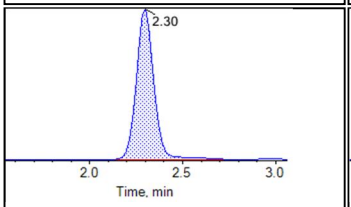
d3-MeFOSAA



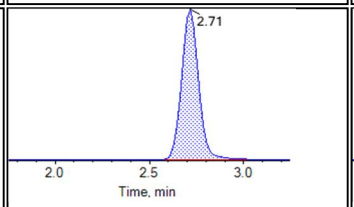
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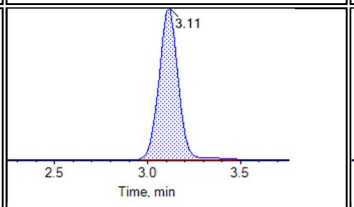
13C5-PFHxA



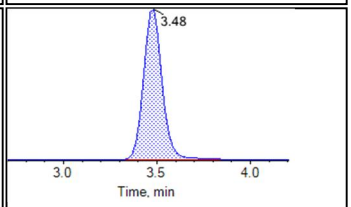
13C4-PFHpA



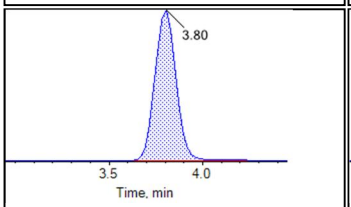
13C8-PFOA



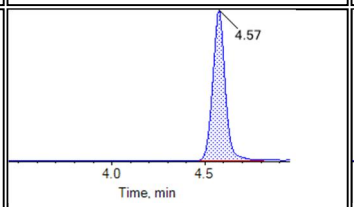
13C9-PFNA



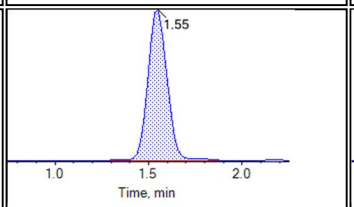
13C6-PFDA



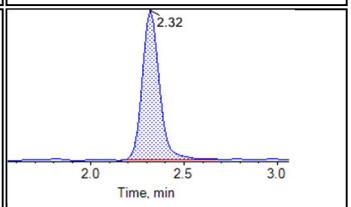
13C7-PFUnA



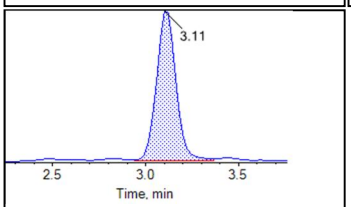
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



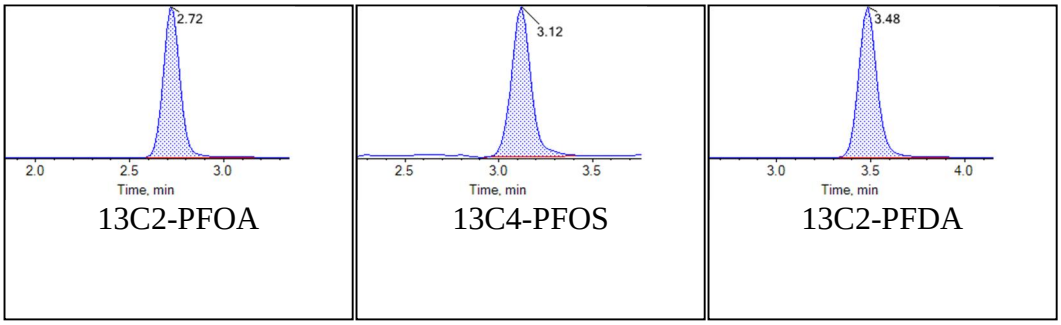
13C8-PFOS

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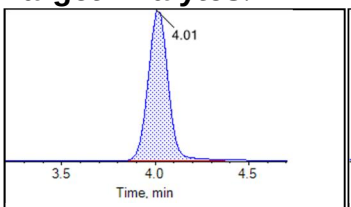
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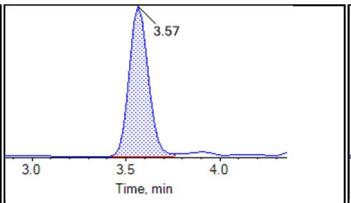
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Sample ID	VC-PM324-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:32:20	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

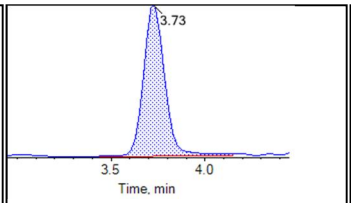
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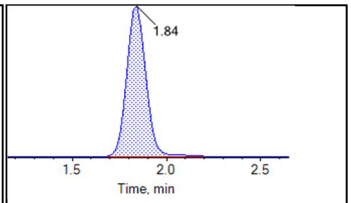
13C2-PFDoA



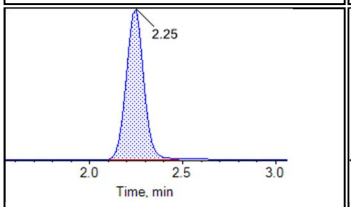
d3-MeFOSAA



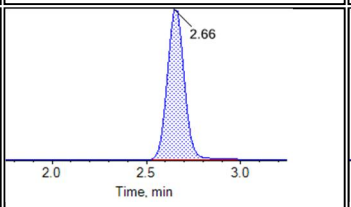
d5-EtFOSAA



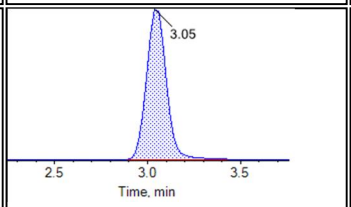
13C5-PFHxA



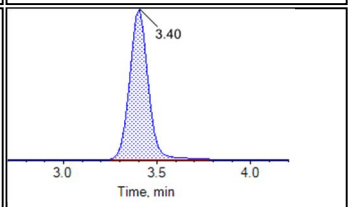
13C4-PFHpA



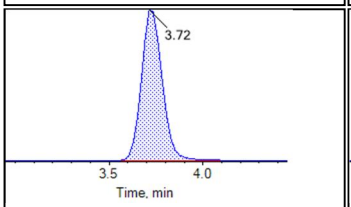
13C8-PFOA



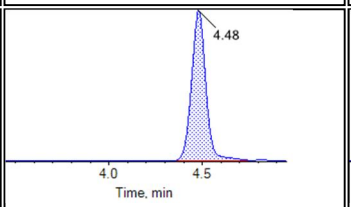
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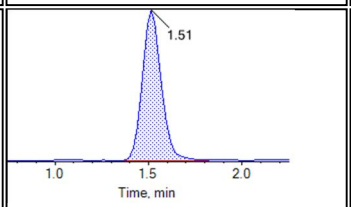
13C6-PFDA



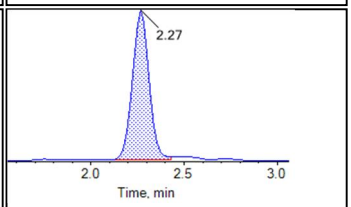
13C7-PFUnA



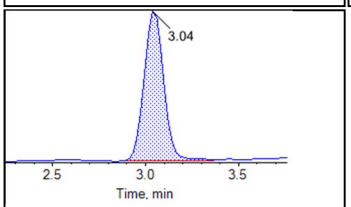
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



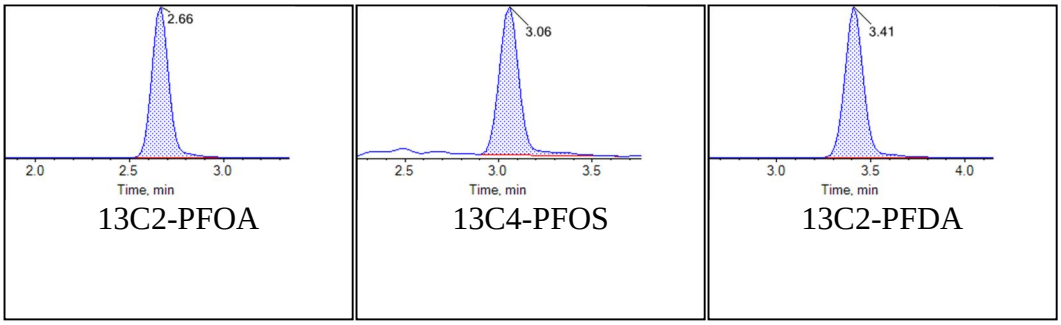
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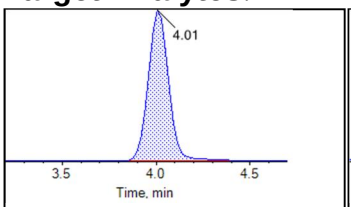
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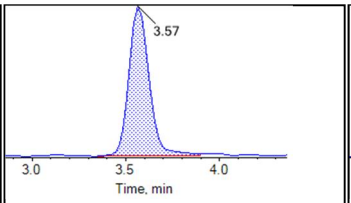
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Sample ID	VC-PM324-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:43:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

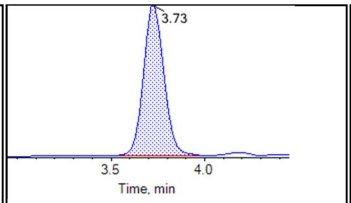
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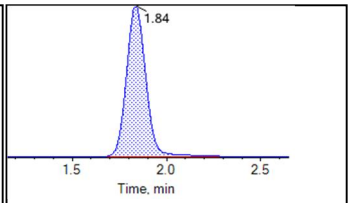
13C2-PFDoA



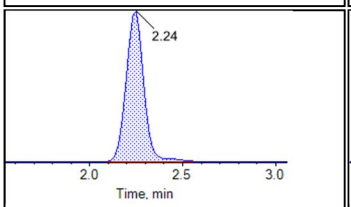
d3-MeFOSAA



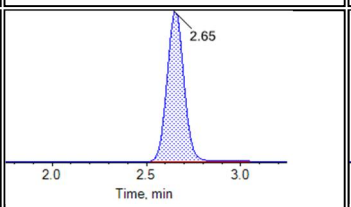
d5-EtFOSAA



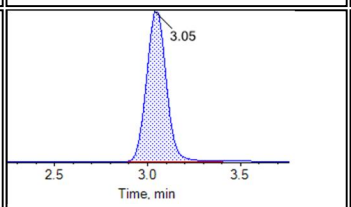
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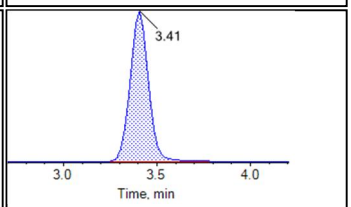
13C4-PFHpA



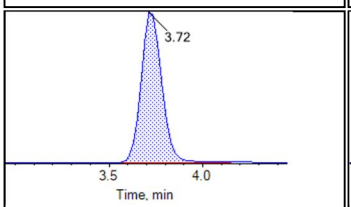
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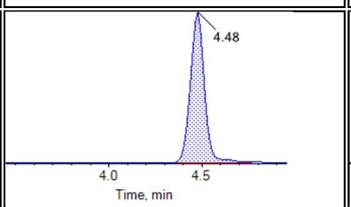
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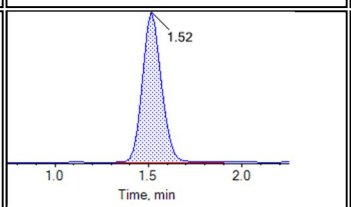
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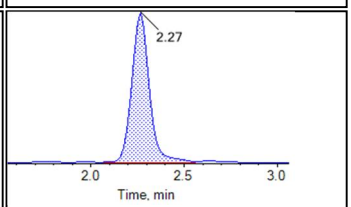
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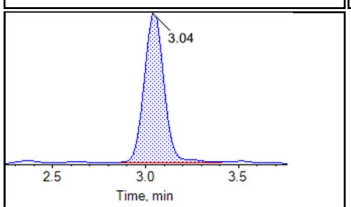
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

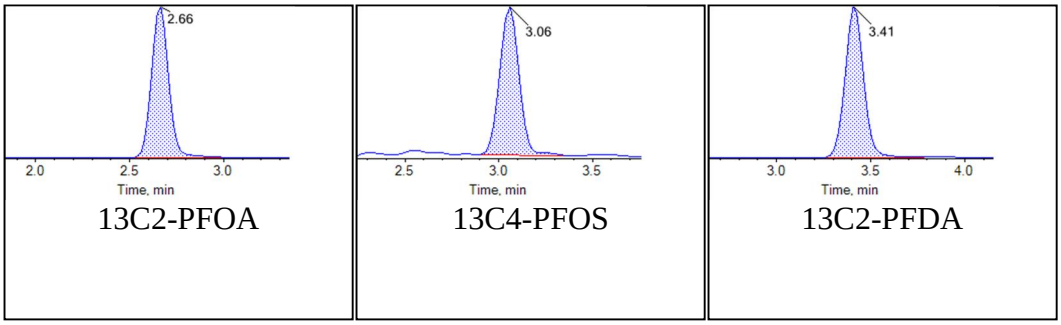


13C8-PFOS

Chromatogram Report

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Internal Standards:



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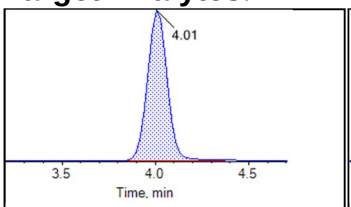
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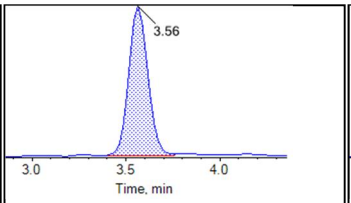
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Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T00:54:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

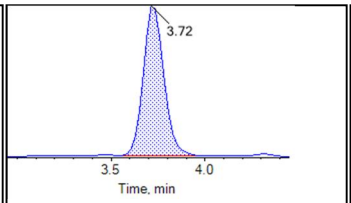
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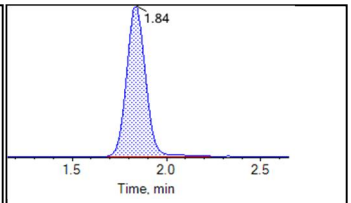
13C2-PFDoA



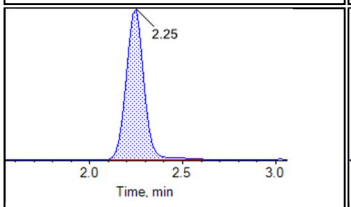
d3-MeFOSAA



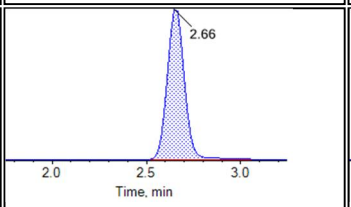
d5-EtFOSAA



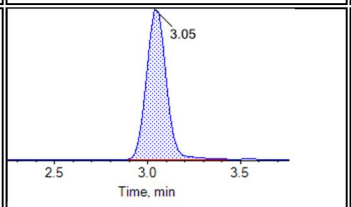
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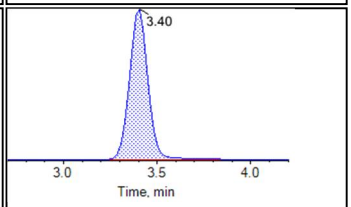
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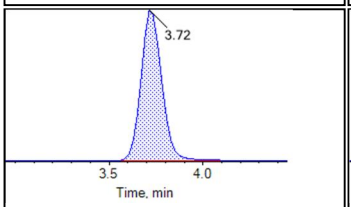
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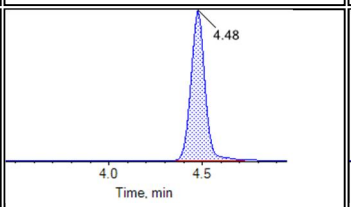
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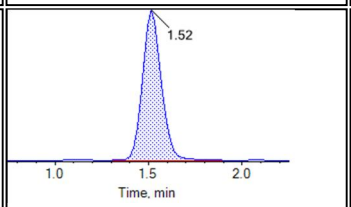
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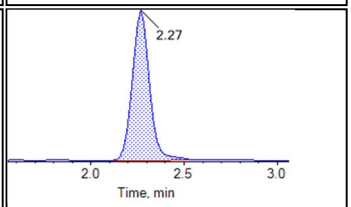
13C7-PFUnA



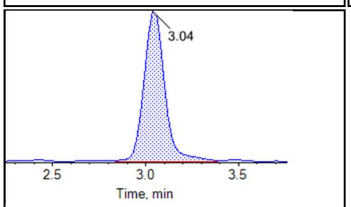
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

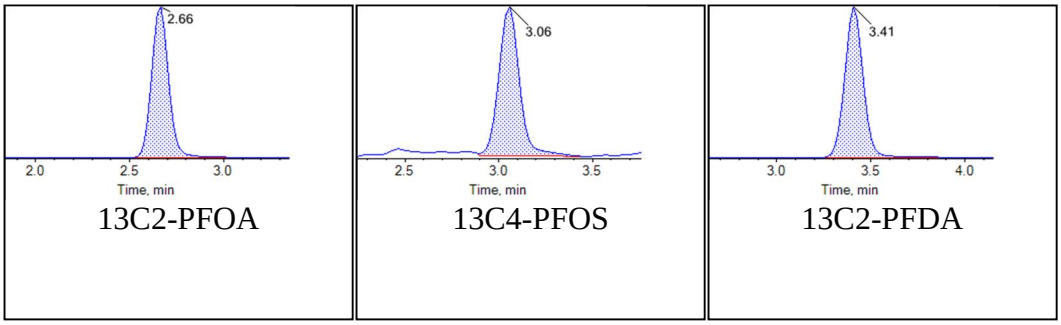


13C8-PFOS

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Internal Standards:



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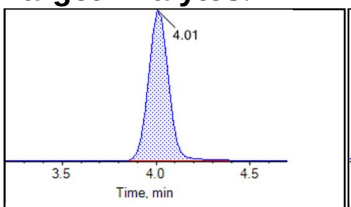
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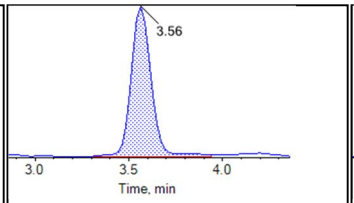
Sample Name	J8364-FS-D(5)	**Injection Vial**	45
Sample ID	VC-PM324-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:04:56	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

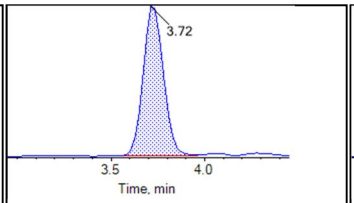
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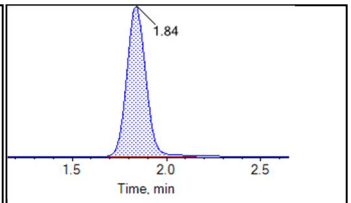
13C2-PFDoA



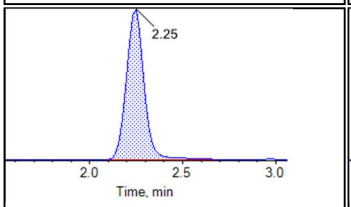
d3-MeFOSAA



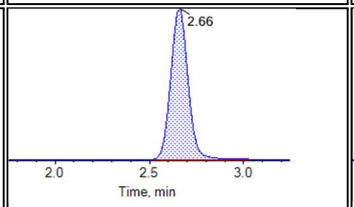
d5-EtFOSAA



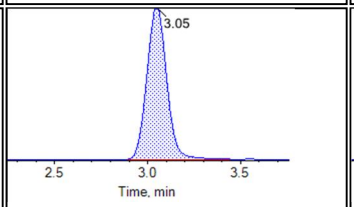
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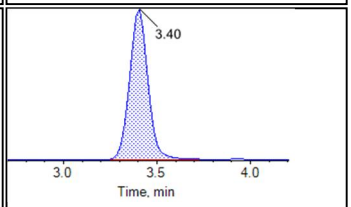
13C4-PFHpA



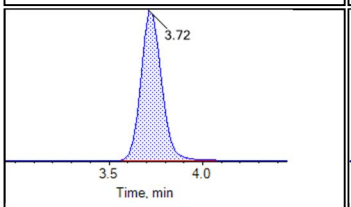
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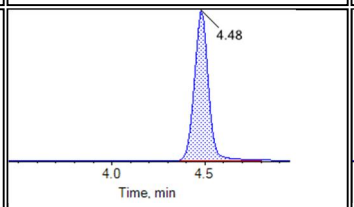
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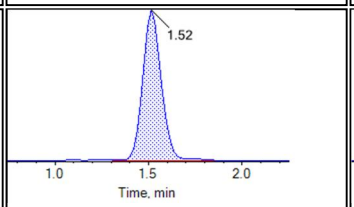
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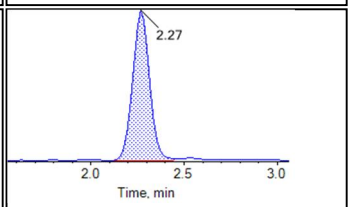
13C7-PFUnA



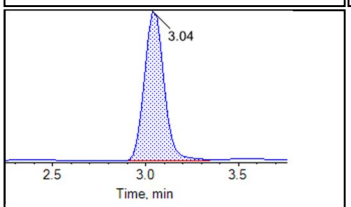
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



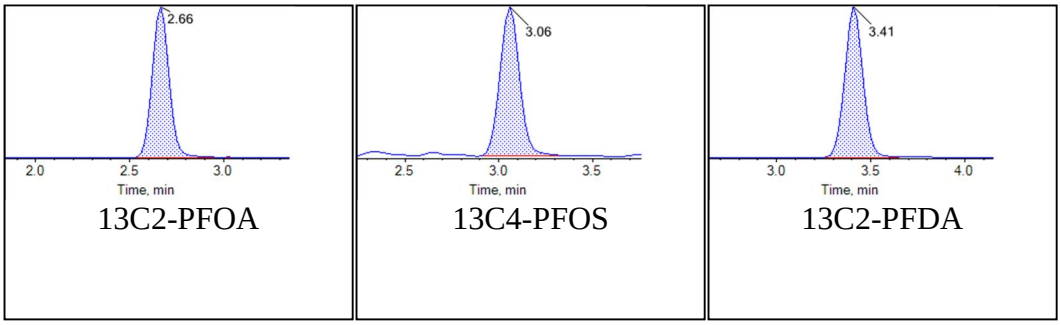
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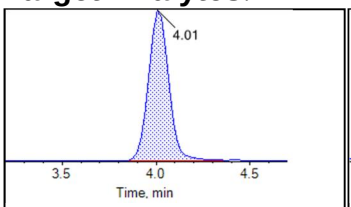
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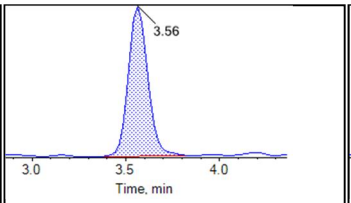
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Sample ID	VC-PM324-SB03-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:15:48	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

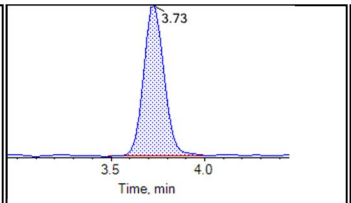
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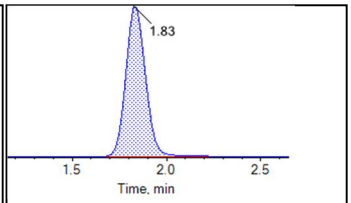
13C2-PFDoA



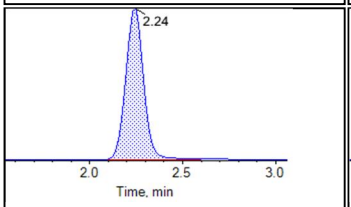
d3-MeFOSAA



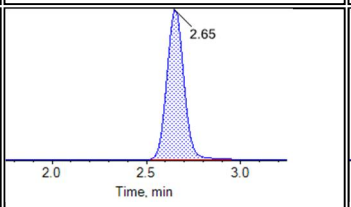
d5-EtFOSAA



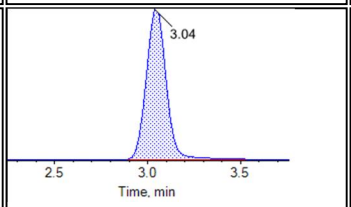
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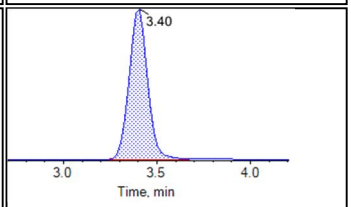
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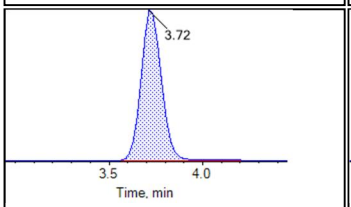
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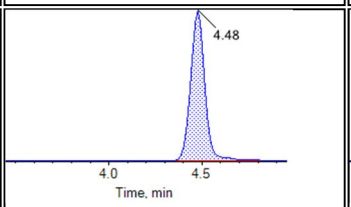
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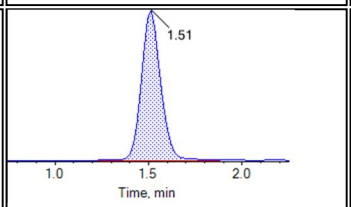
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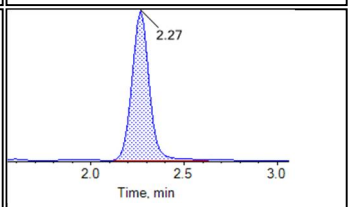
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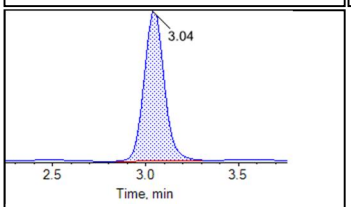
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



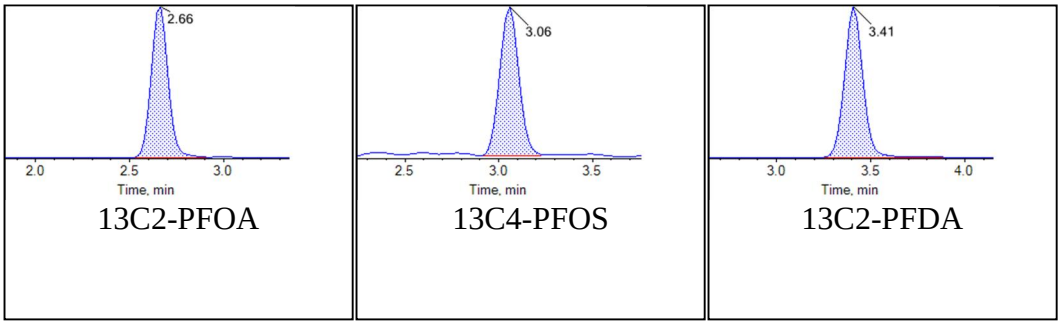
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Internal Standards:



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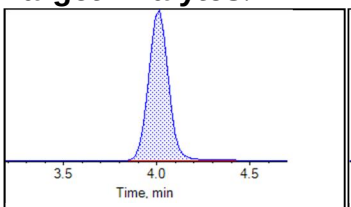
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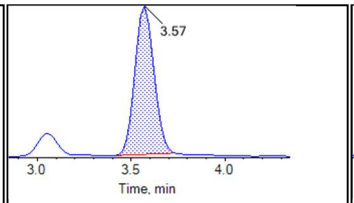
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Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
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Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

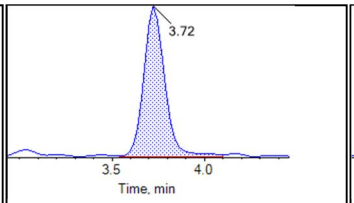
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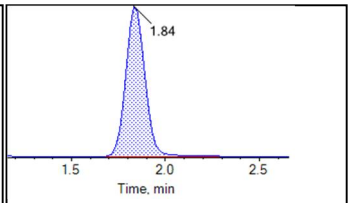
13C2-PFDoA



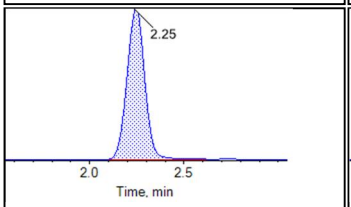
d3-MeFOSAA



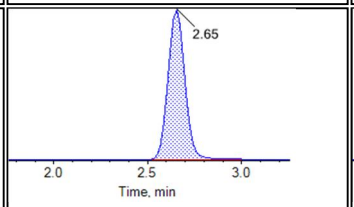
d5-EtFOSAA



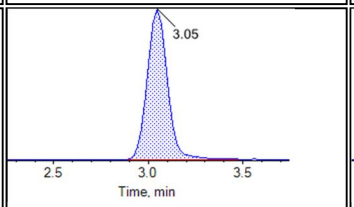
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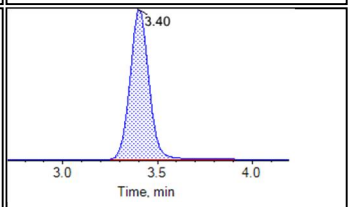
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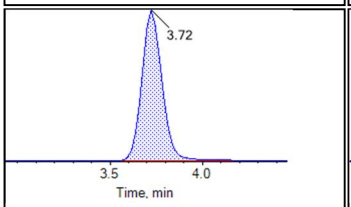
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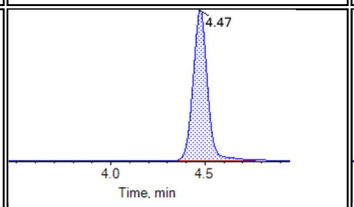
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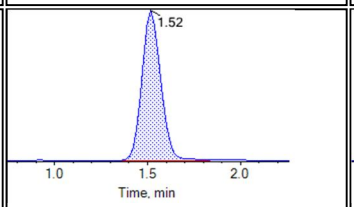
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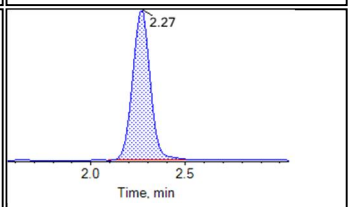
13C7-PFUnA



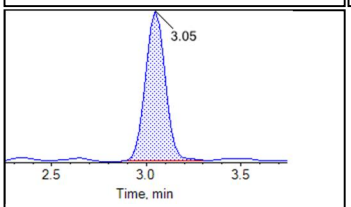
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



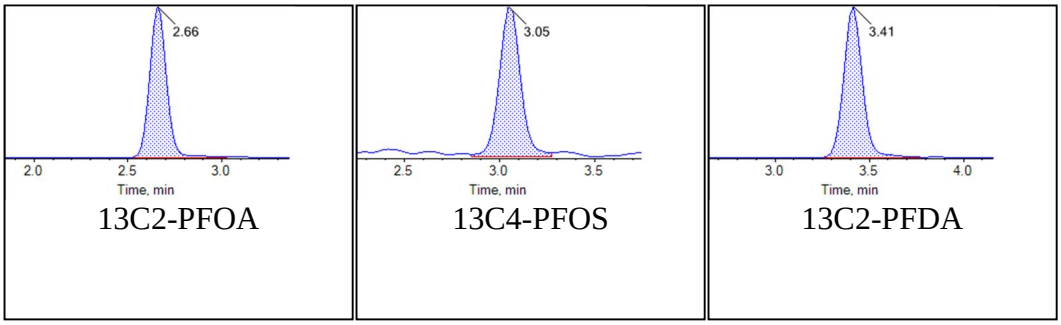
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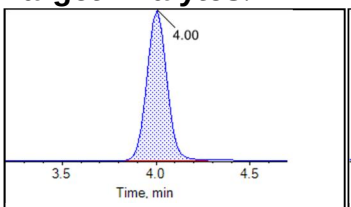
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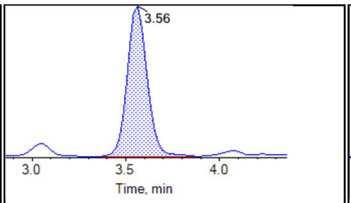
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Sample ID	VC-PM324-SB03-0102-MS	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:37:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

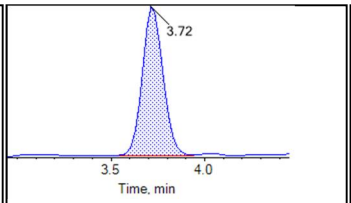
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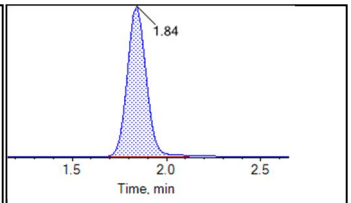
13C2-PFDoA



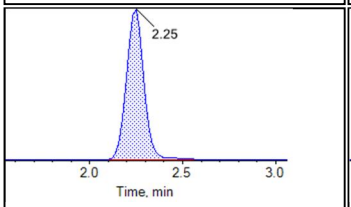
d3-MeFOSAA



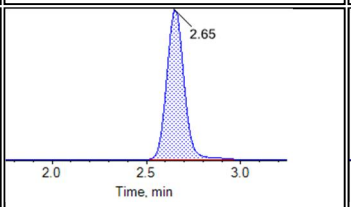
d5-EtFOSAA



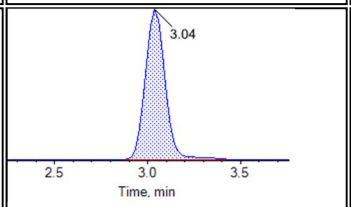
13C5-PFHxA



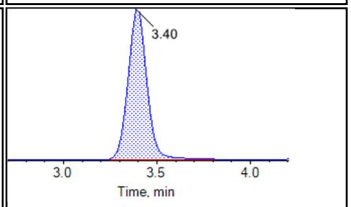
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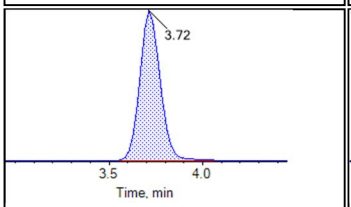
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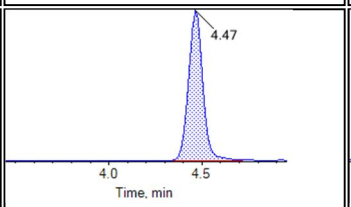
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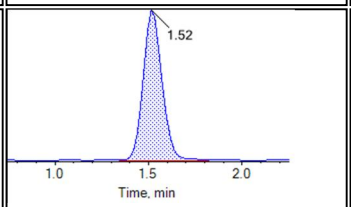
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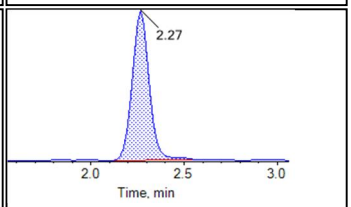
13C7-PFUnA



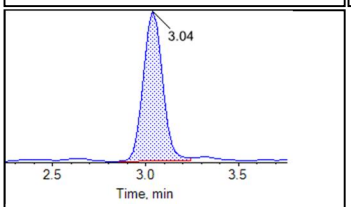
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

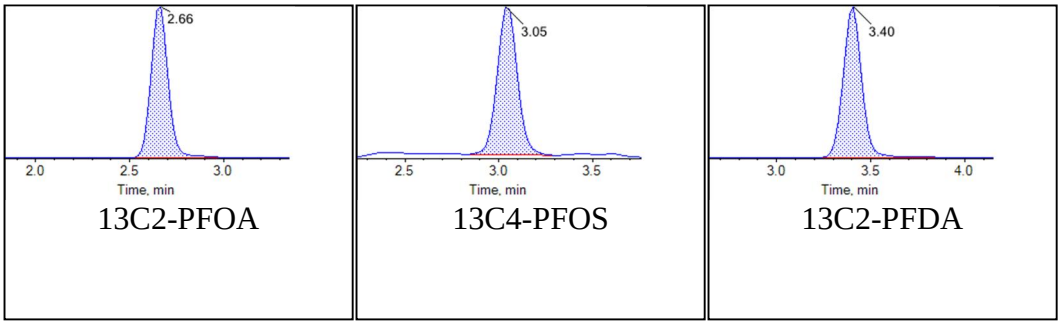


13C8-PFOS

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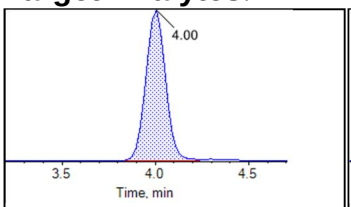
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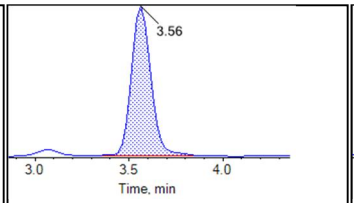
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Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T01:48:24	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

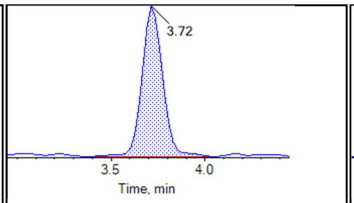
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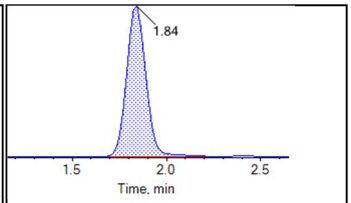
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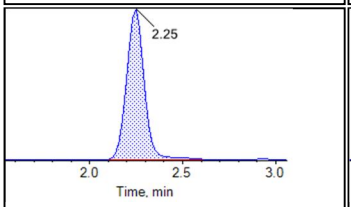
d3-MeFOSAA



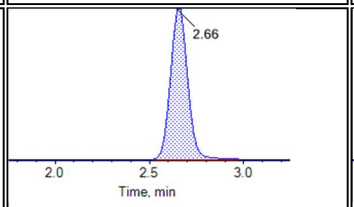
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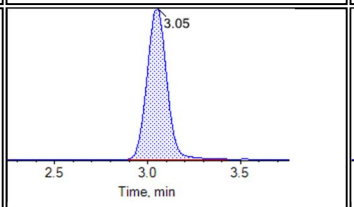
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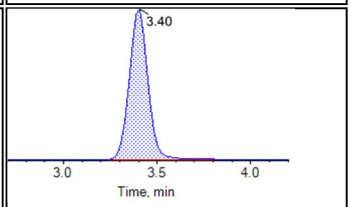
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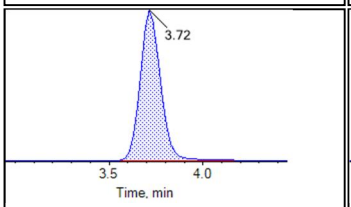
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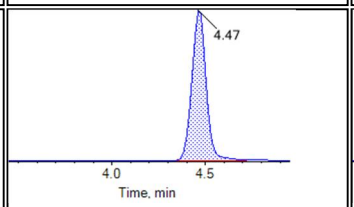
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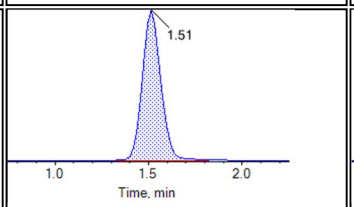
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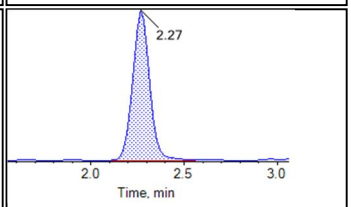
13C7-PFUnA



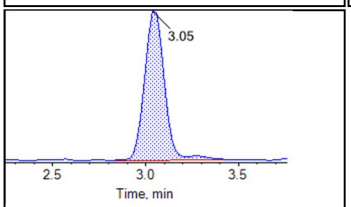
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



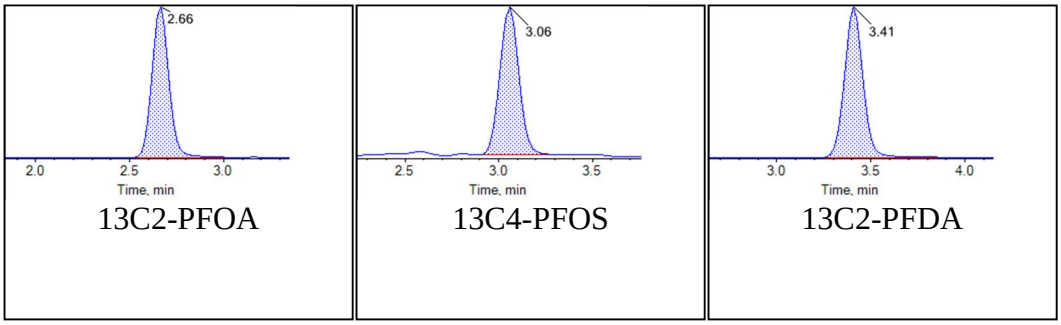
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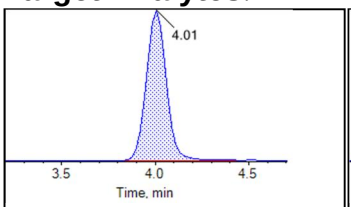
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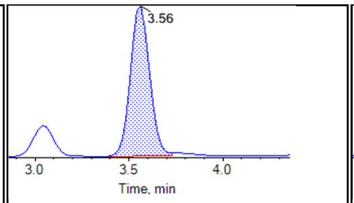
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Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
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Acquisition Date	2018-10-09T02:10:07	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

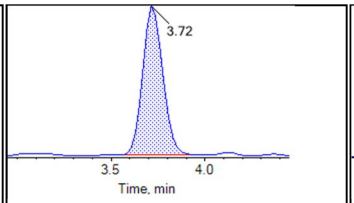
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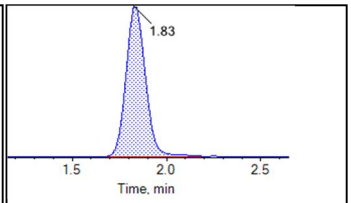
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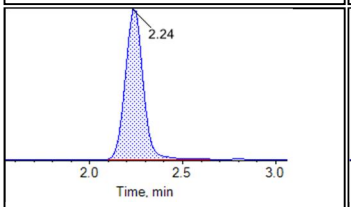
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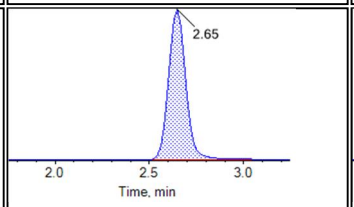
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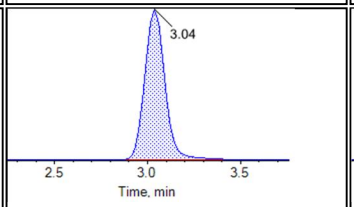
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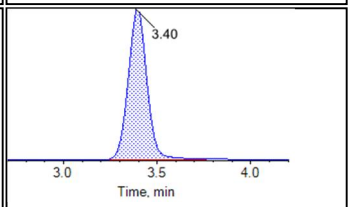
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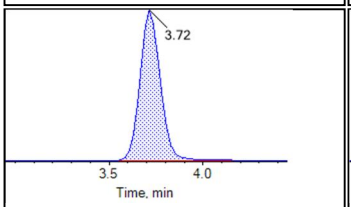
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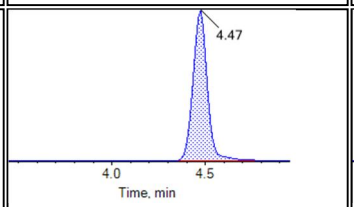
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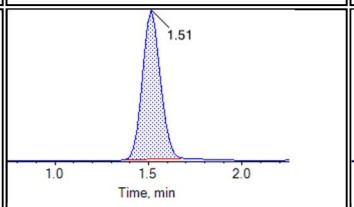
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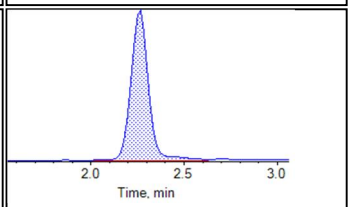
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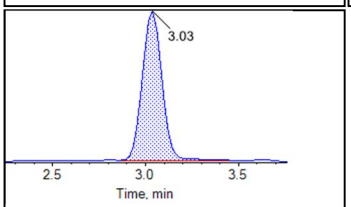
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



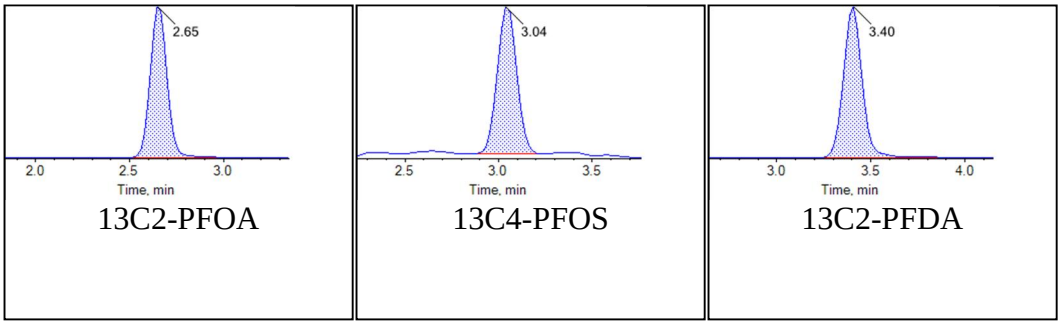
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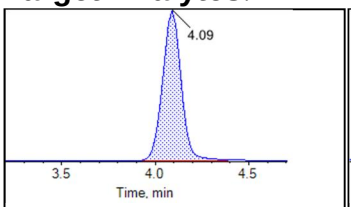
Chromatogram Report

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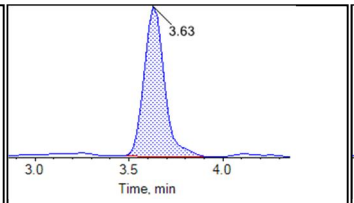
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Sample ID	L3	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:01:53	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

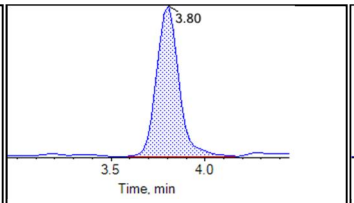
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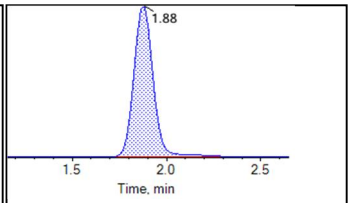
13C2-PFDoA



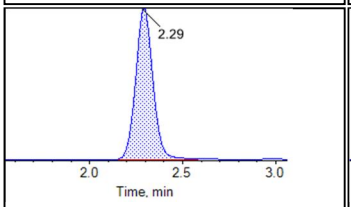
d3-MeFOSAA



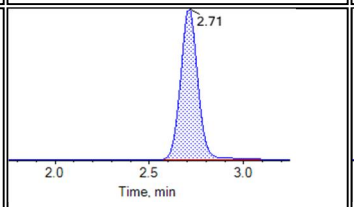
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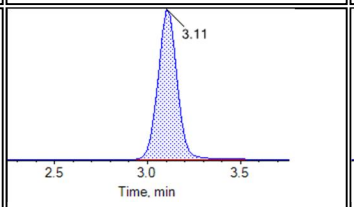
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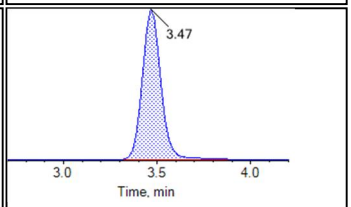
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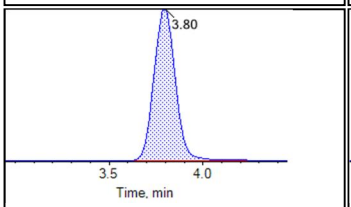
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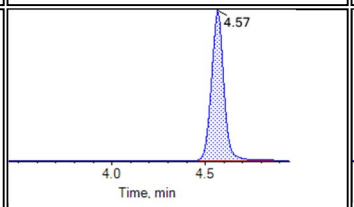
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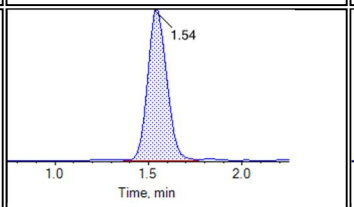
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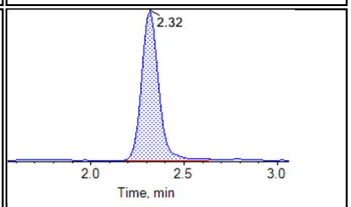
13C7-PFUnA



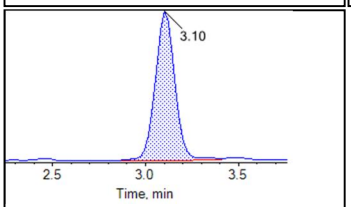
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



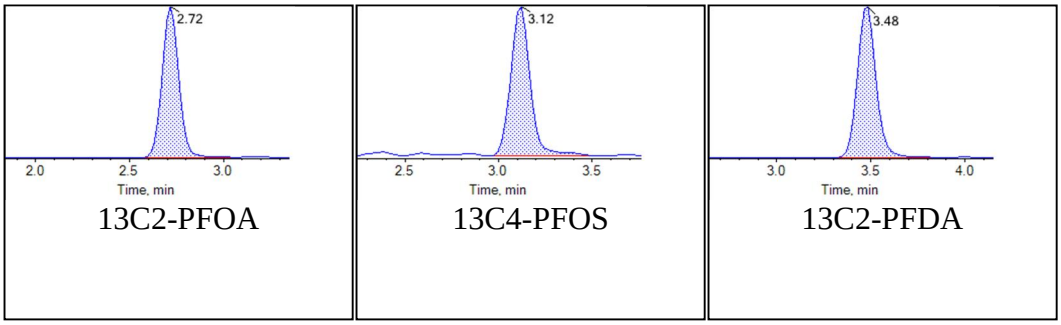
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Internal Standards:



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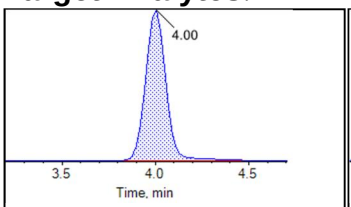
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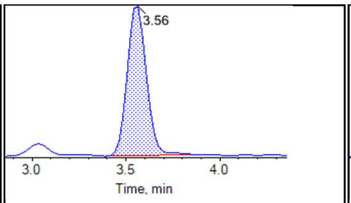
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Sample ID	VC-PM324-SB03-0102-MSD	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:20:59	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

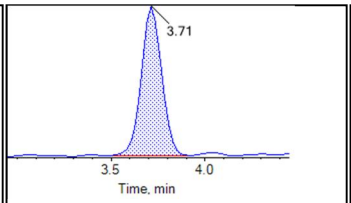
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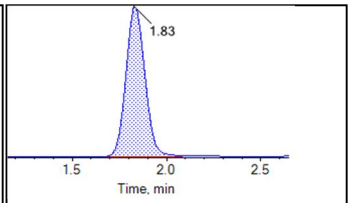
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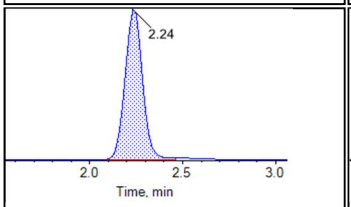
d3-MeFOSAA



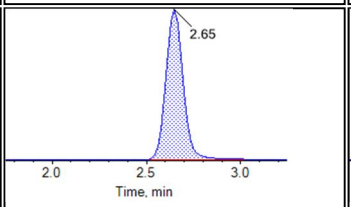
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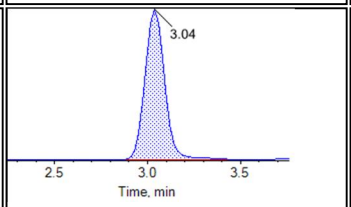
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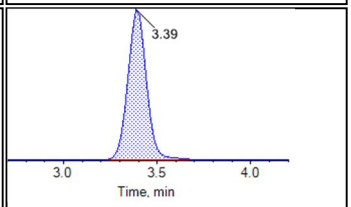
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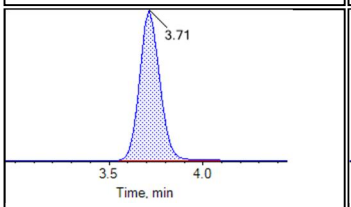
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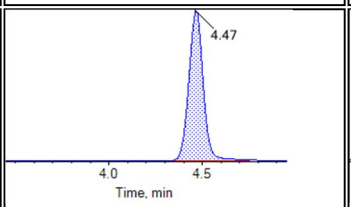
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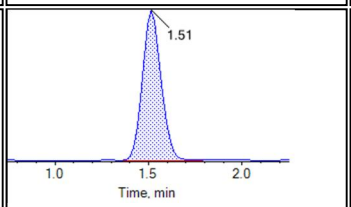
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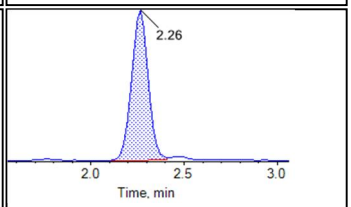
13C7-PFUnA



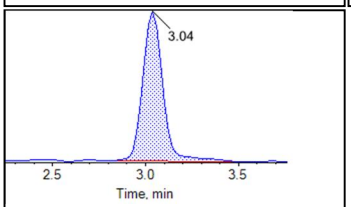
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



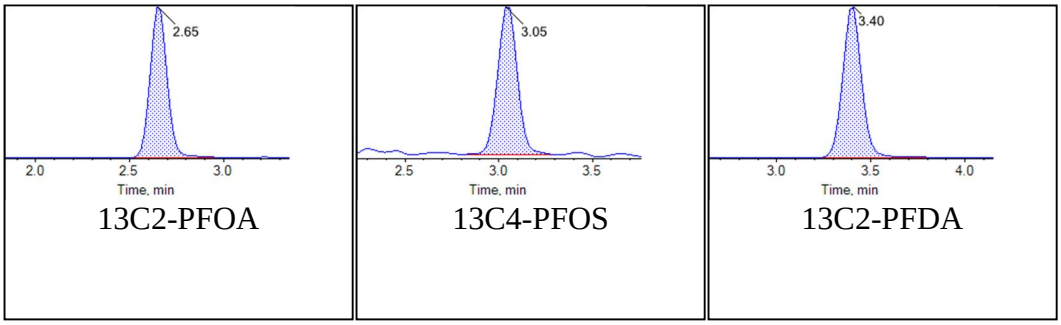
13C8-PFOS

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Internal Standards:



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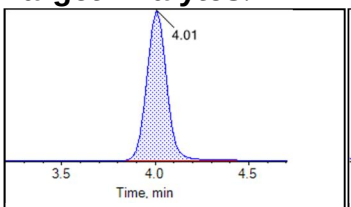
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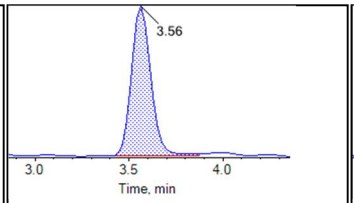
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Sample ID	VC-PM64B-SS01-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:31:50	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

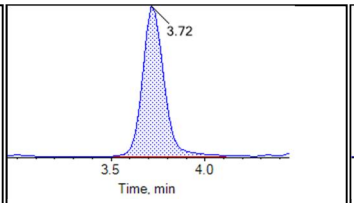
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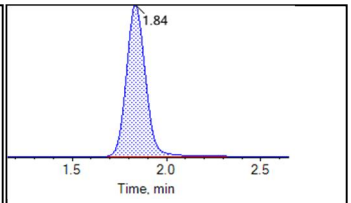
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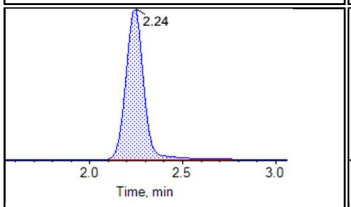
d3-MeFOSAA



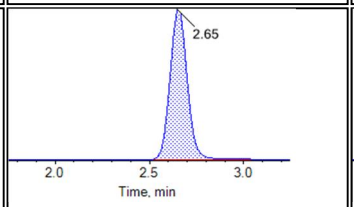
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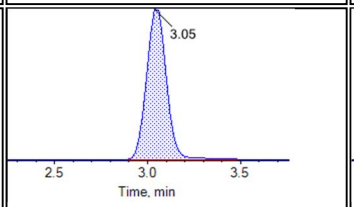
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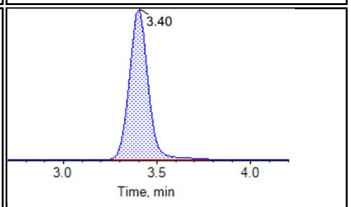
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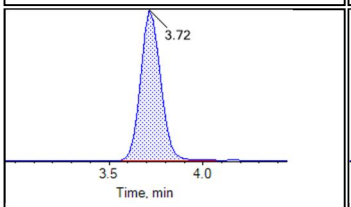
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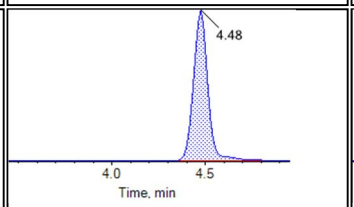
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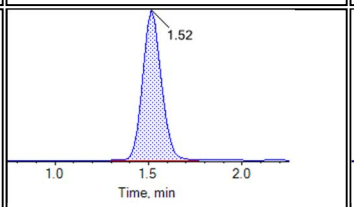
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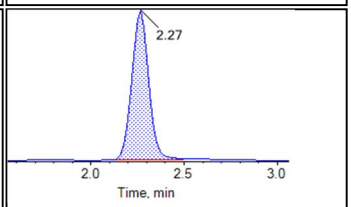
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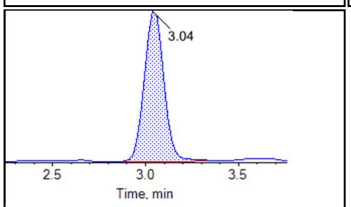
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13C3-PFBS



13C3-PFHxS

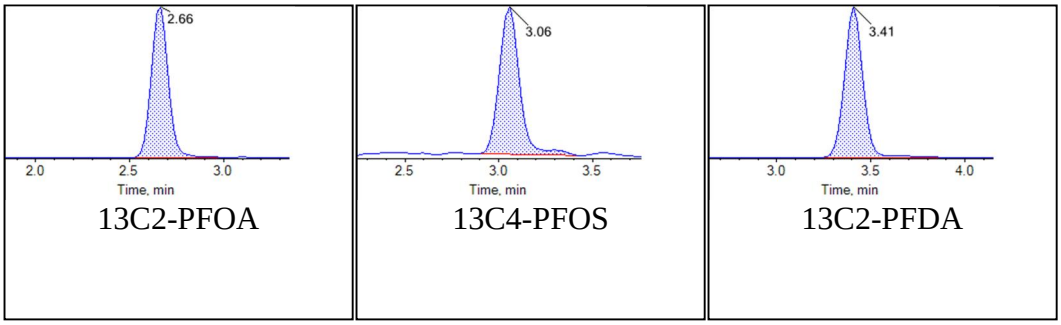


13C8-PFOS

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Internal Standards:



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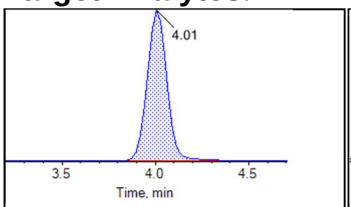
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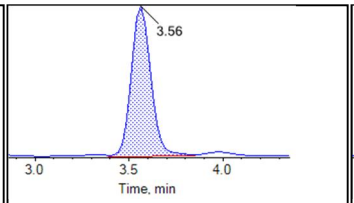
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Sample ID	VC-PM64B-SB01-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:42:42	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

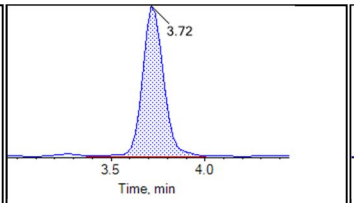
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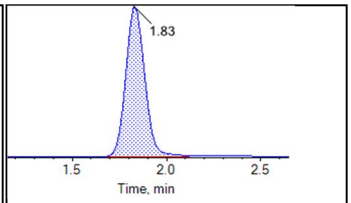
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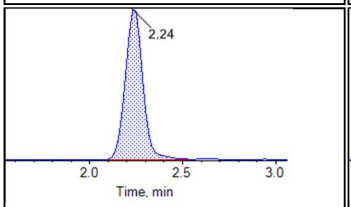
d3-MeFOSAA



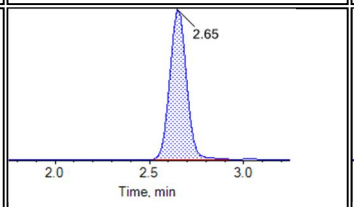
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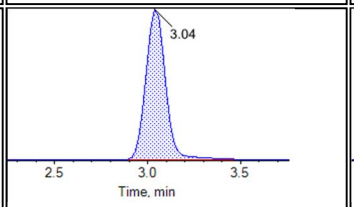
13C5-PFHxA



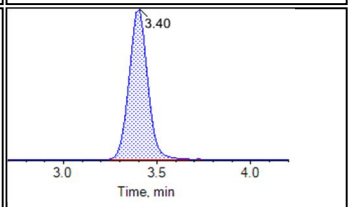
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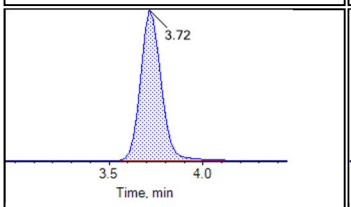
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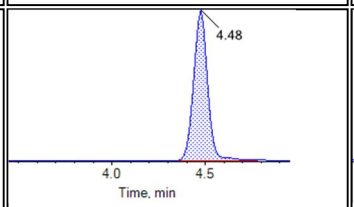
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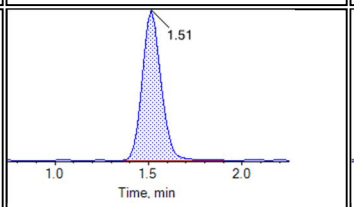
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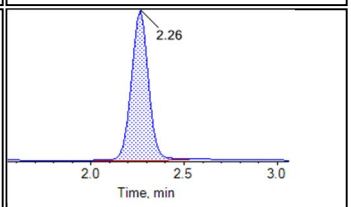
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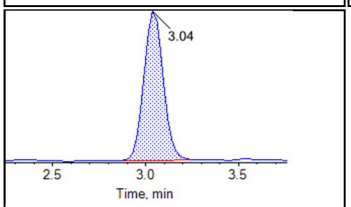
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



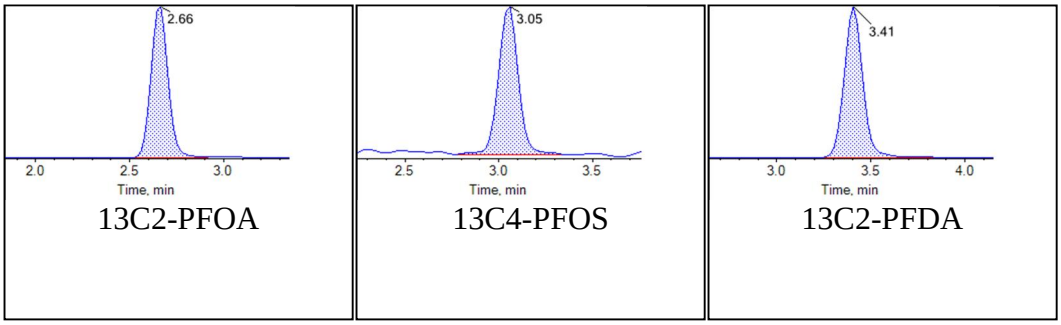
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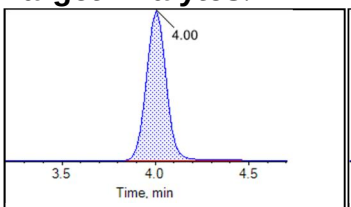
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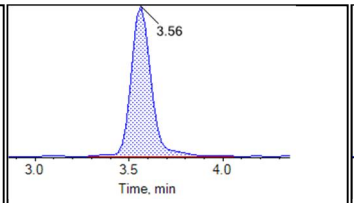
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Sample ID	VC-PM64B-SB01-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T02:53:33	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

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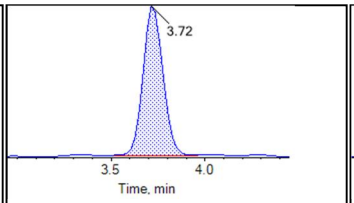
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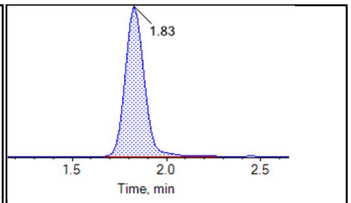
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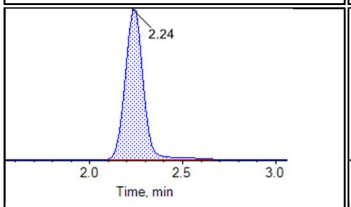
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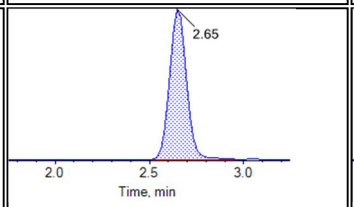
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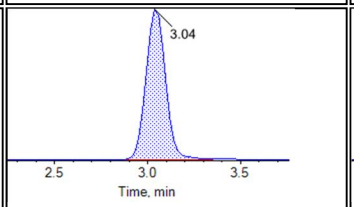
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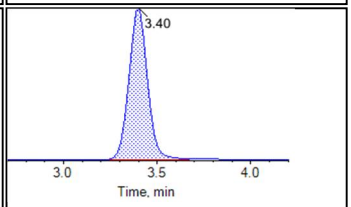
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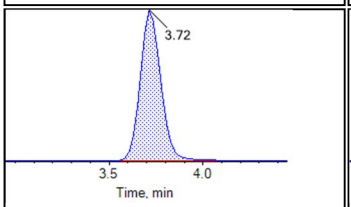
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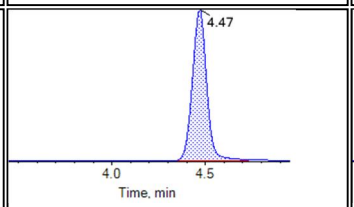
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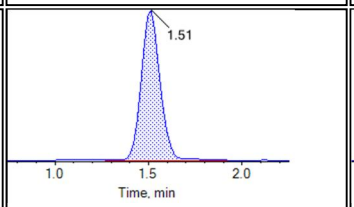
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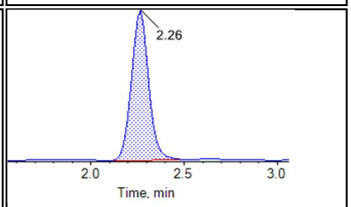
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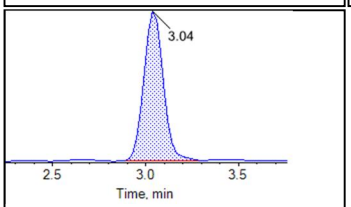
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



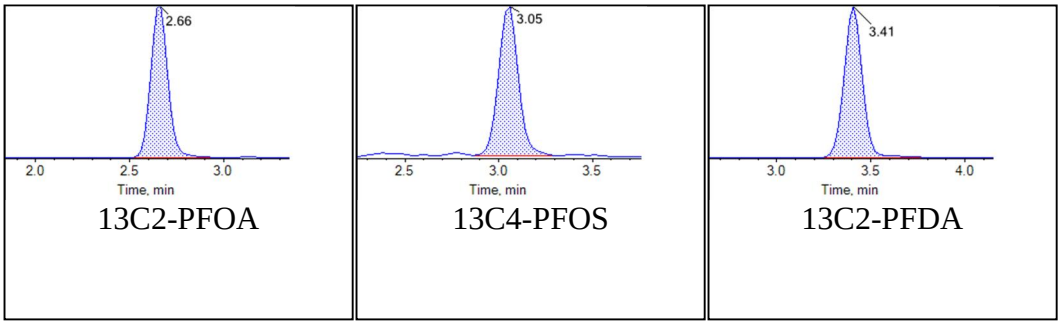
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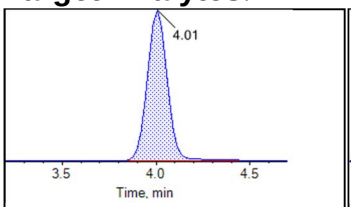
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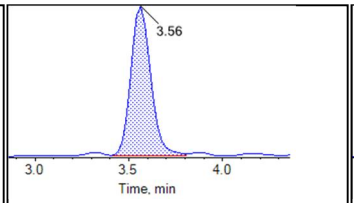
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Sample ID	VC-PM64B-SS02-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:04:26	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

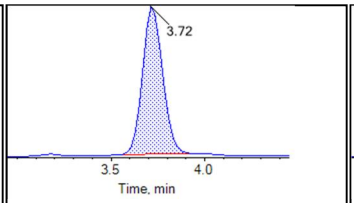
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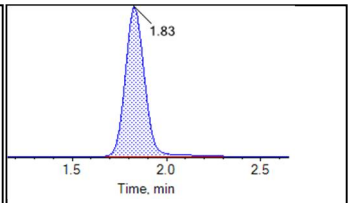
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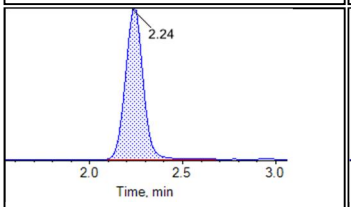
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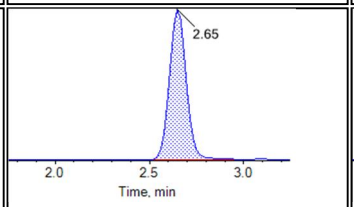
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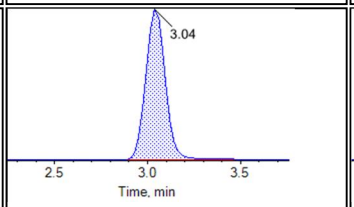
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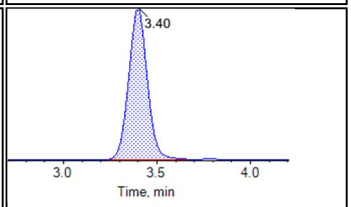
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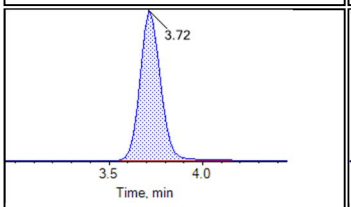
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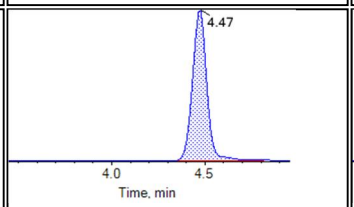
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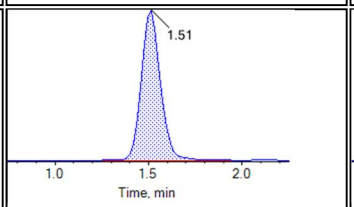
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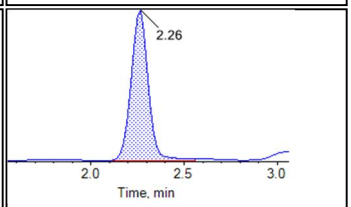
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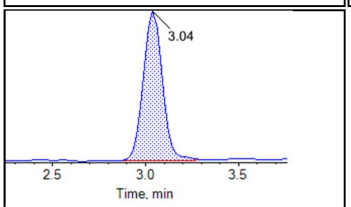
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



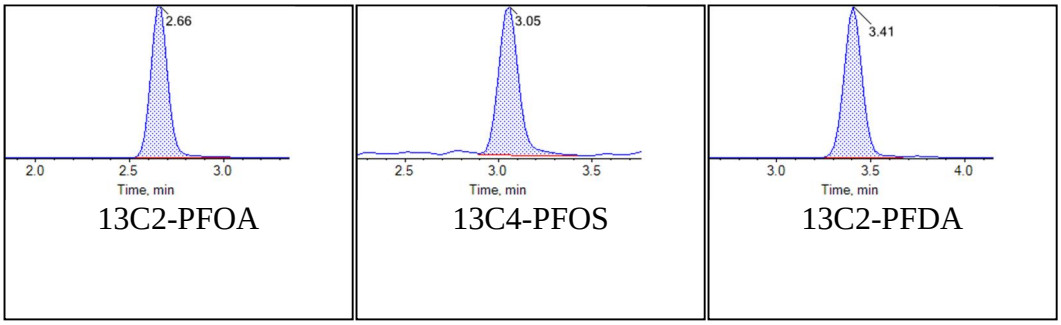
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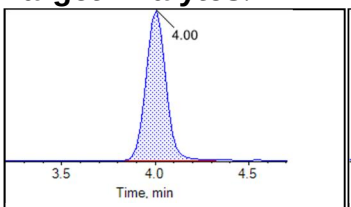
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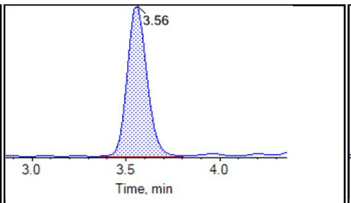
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Sample ID	VC-PM64B-SB02-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:15:19	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

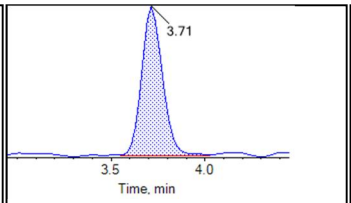
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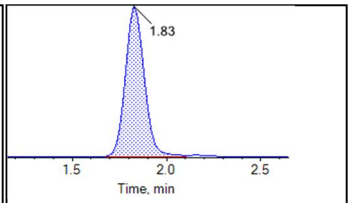
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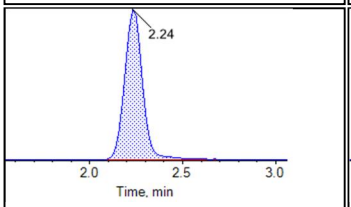
d3-MeFOSAA



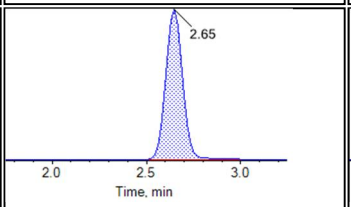
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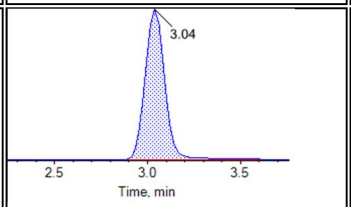
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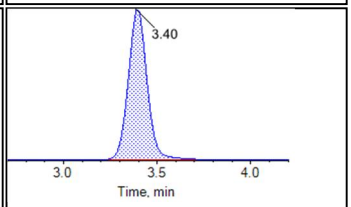
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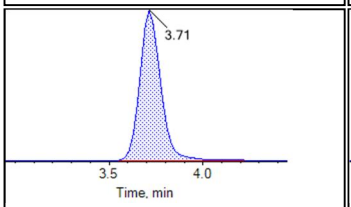
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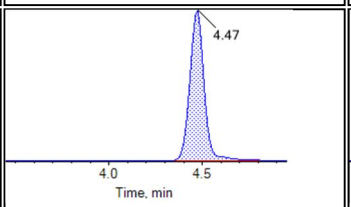
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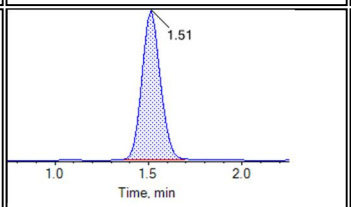
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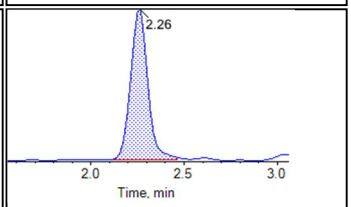
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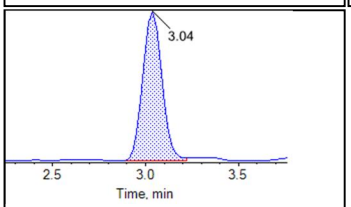
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



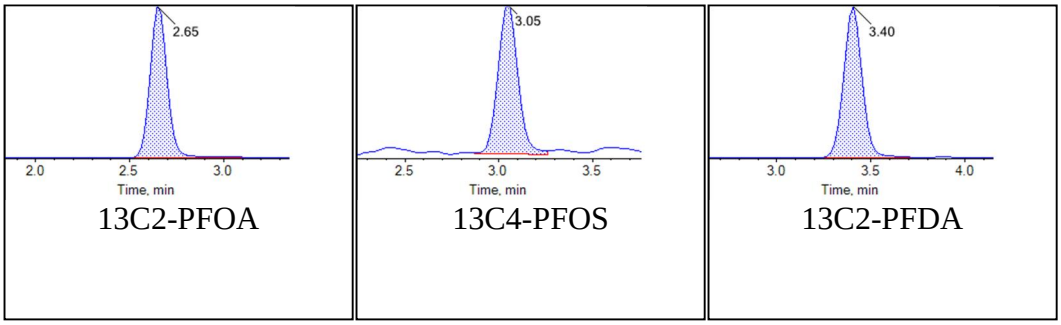
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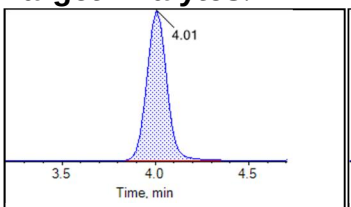
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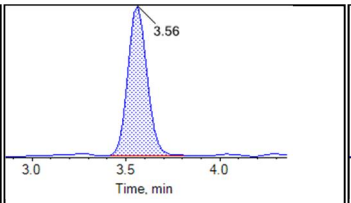
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Sample ID	VC-PM64B-SB02-0506	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:26:11	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

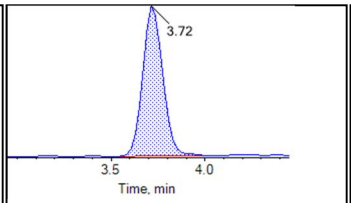
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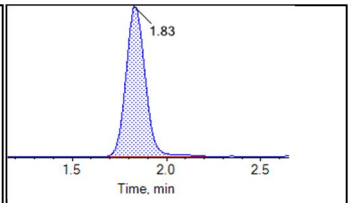
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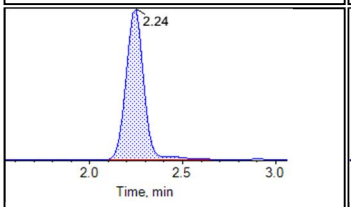
d3-MeFOSAA



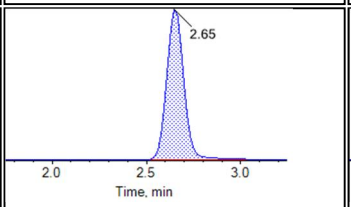
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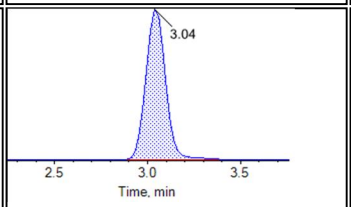
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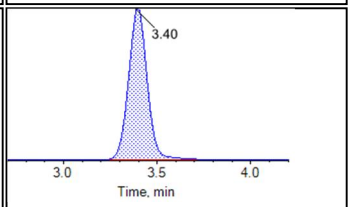
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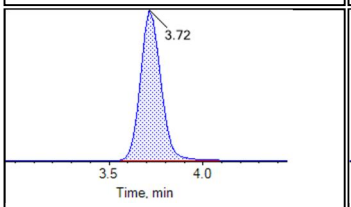
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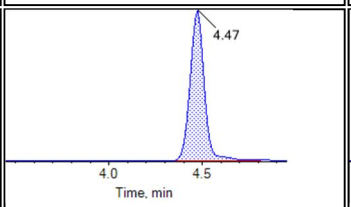
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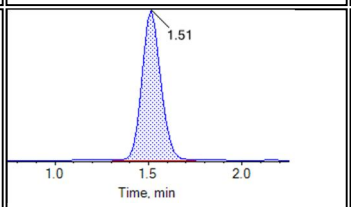
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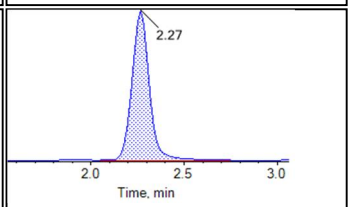
13C7-PFUnA



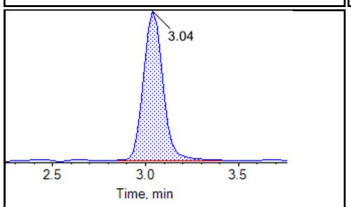
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13C3-PFBS



13C3-PFHxS



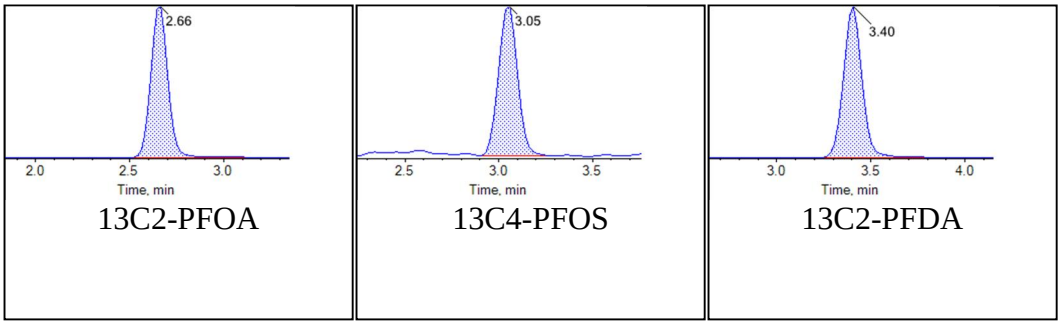
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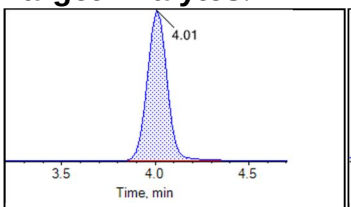
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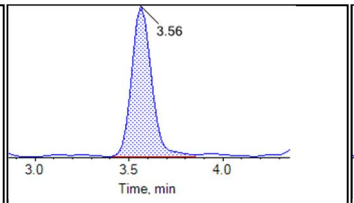
Sample Name	J8379-FS(3)	**Injection Vial**	5
Sample ID	VC-PM64B-SS03-000H	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:37:04	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

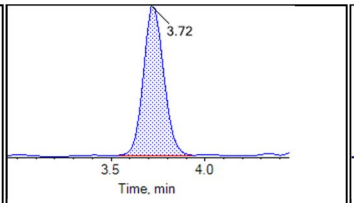
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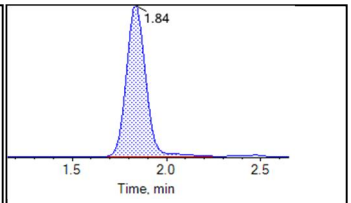
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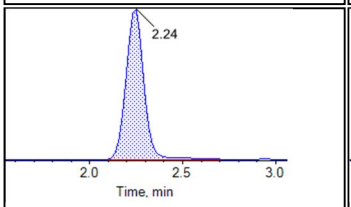
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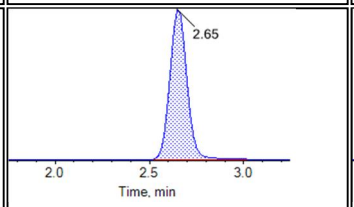
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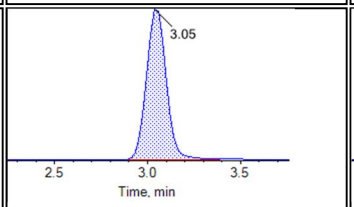
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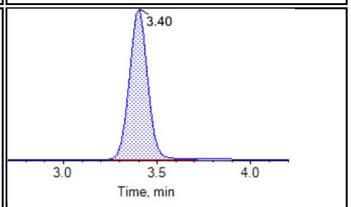
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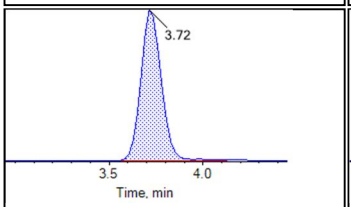
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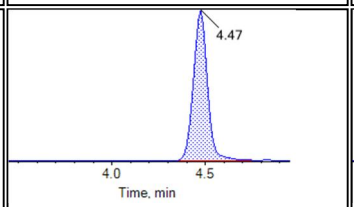
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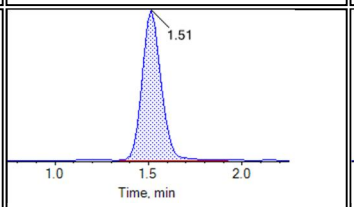
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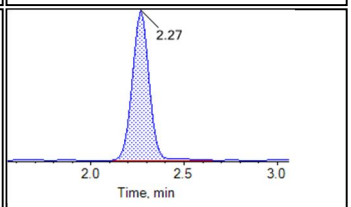
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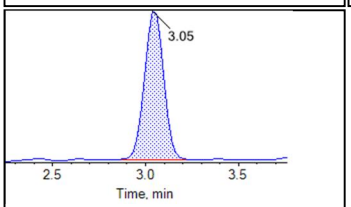
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



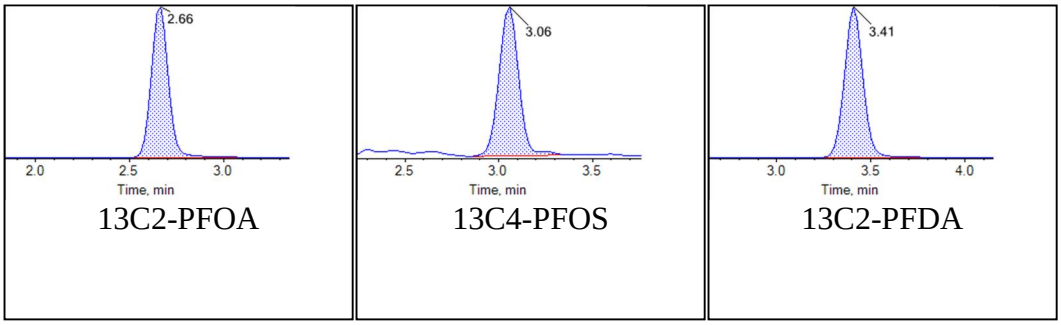
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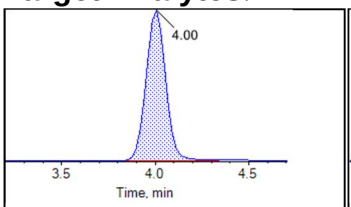
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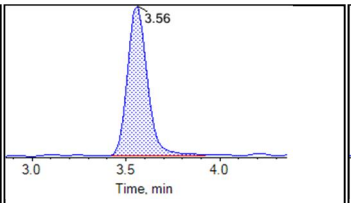
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Sample ID	VC-PM64B-SB03-0102	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-09T03:47:58	**Data File**	18-0581_18-0584A.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

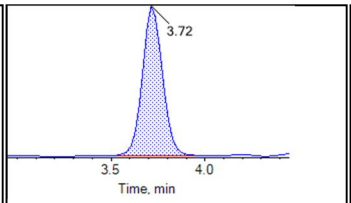
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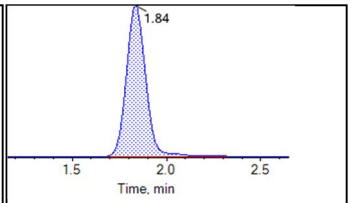
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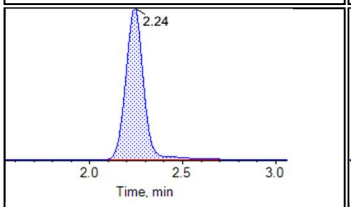
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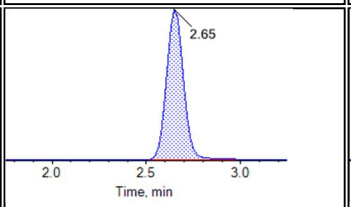
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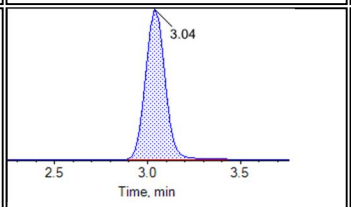
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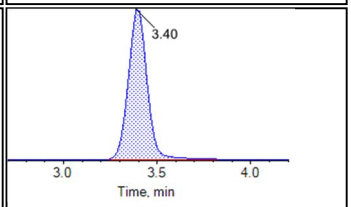
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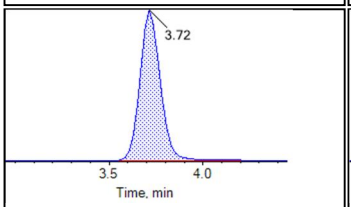
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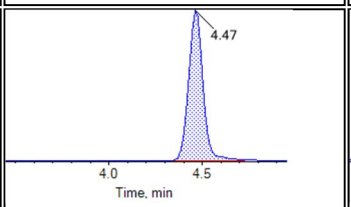
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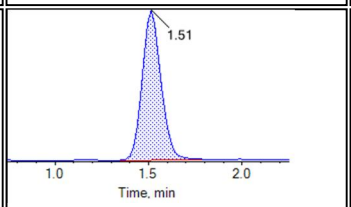
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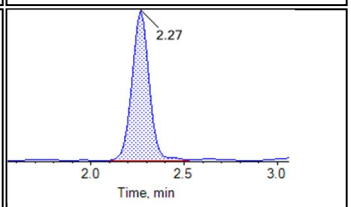
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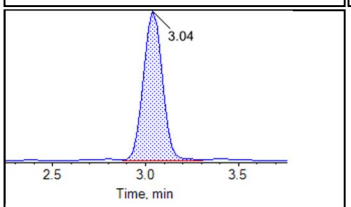
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

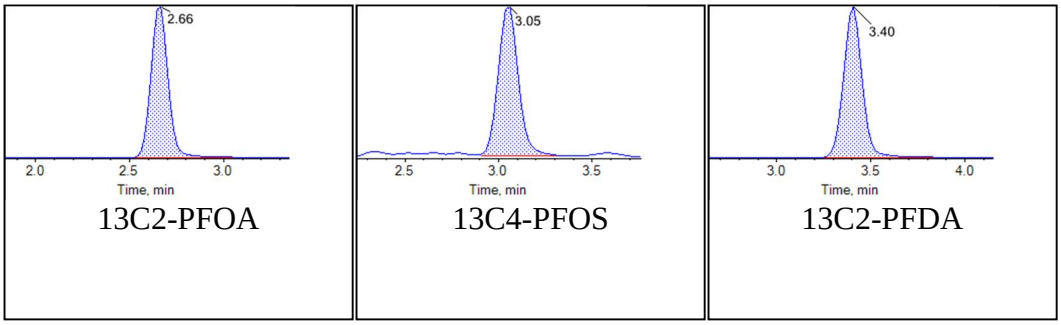


13C8-PFOS

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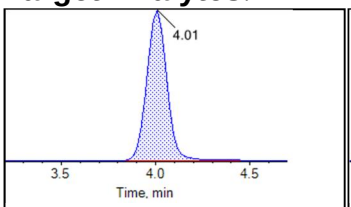
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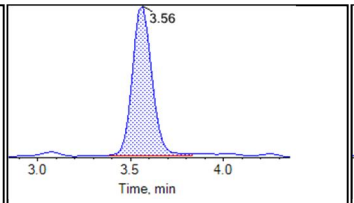
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Sample ID	CCV	**Injection Volume**	10.00
Sample Type	Quality Control	**Instrument Name**	QTRAP 5500
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Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

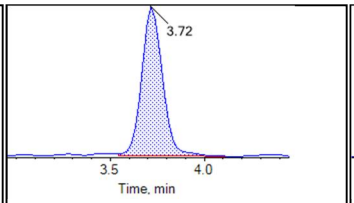
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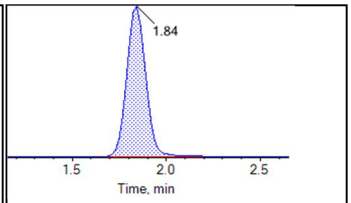
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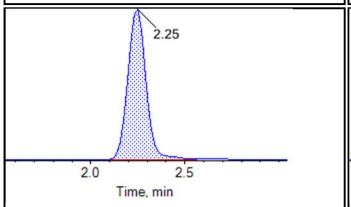
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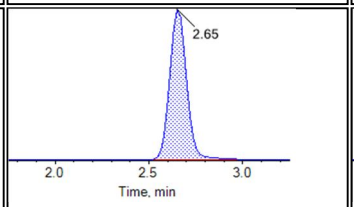
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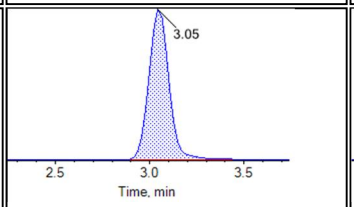
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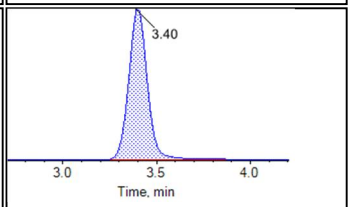
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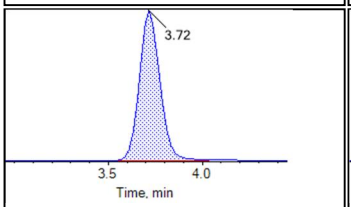
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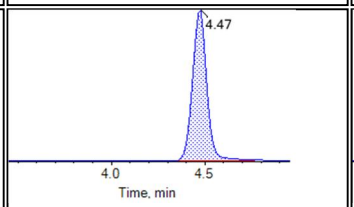
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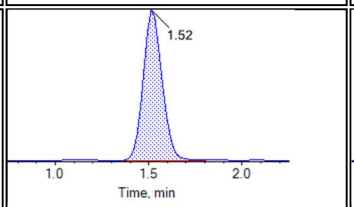
13C6-PFDA



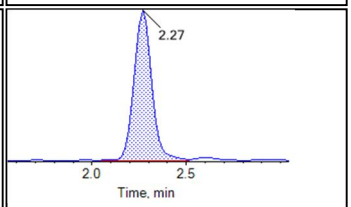
13C7-PFUnA



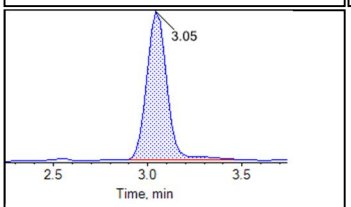
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



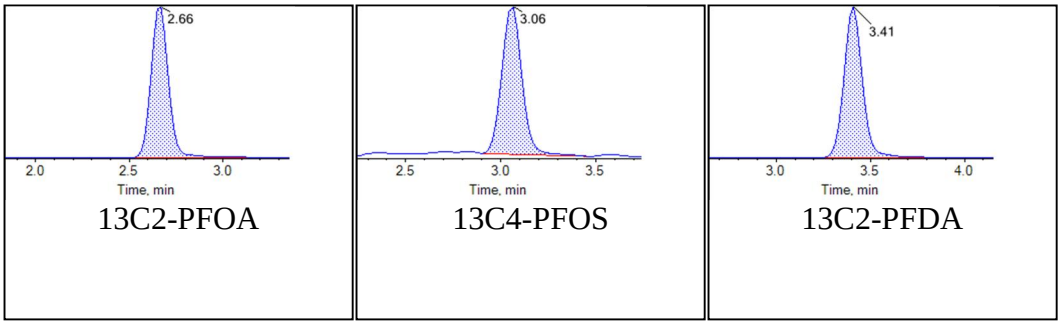
13C8-PFOS

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Internal Standards:



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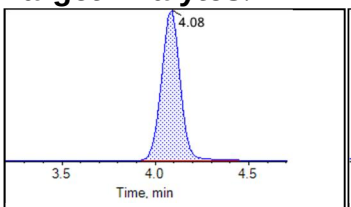
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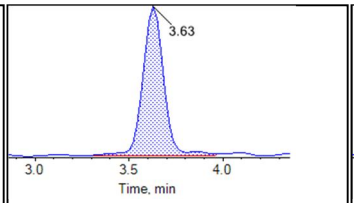
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Sample ID	L4	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:12:44	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

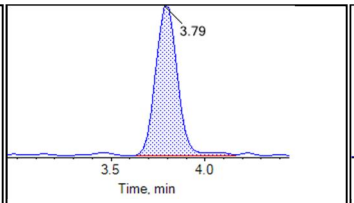
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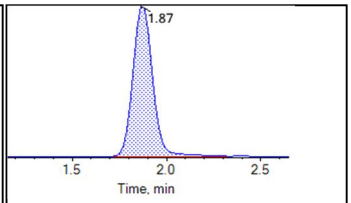
13C2-PFDoA



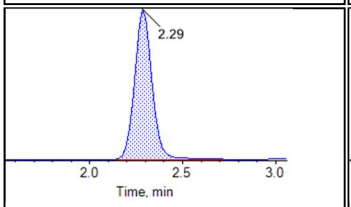
d3-MeFOSAA



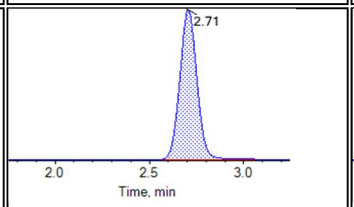
d5-EtFOSAA



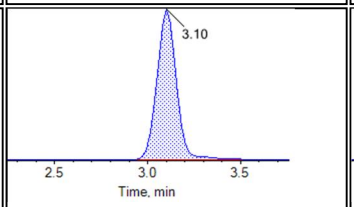
13C5-PFHxA



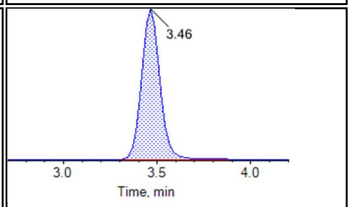
13C4-PFHpA



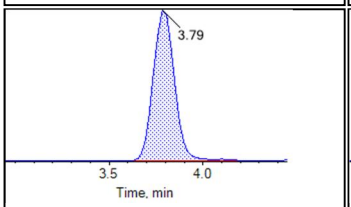
13C8-PFOA



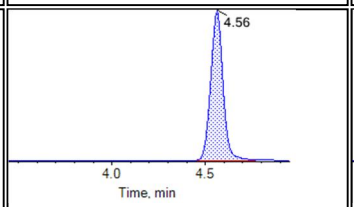
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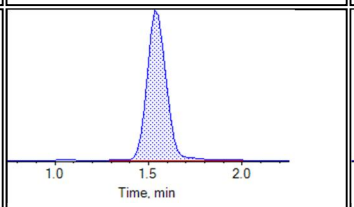
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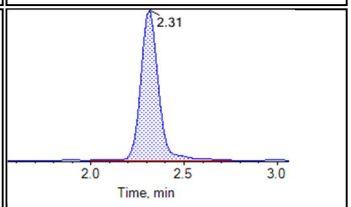
13C7-PFUnA



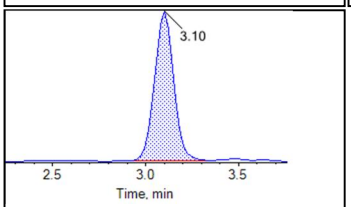
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS

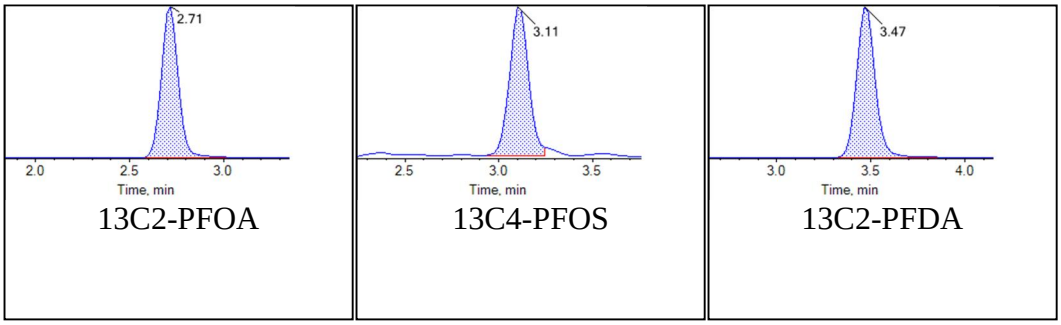


13C8-PFOS

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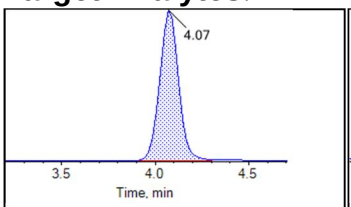
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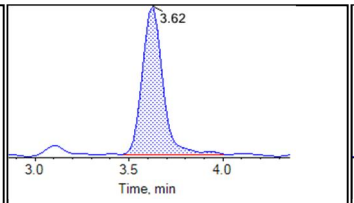
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Sample ID	L5	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:23:36	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

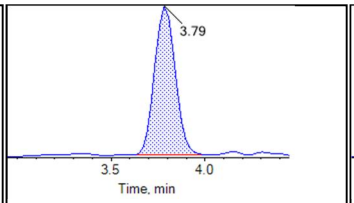
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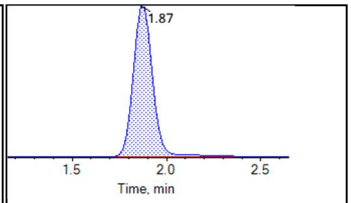
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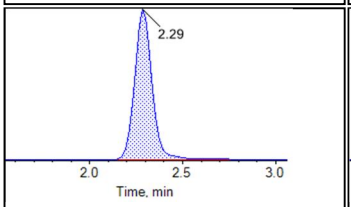
d3-MeFOSAA



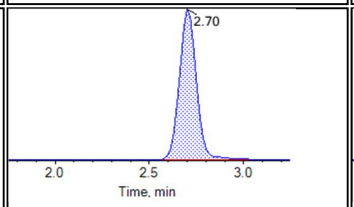
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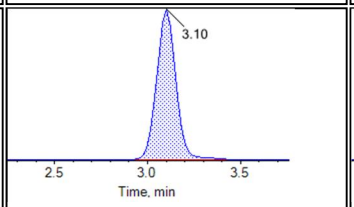
13C5-PFHxA



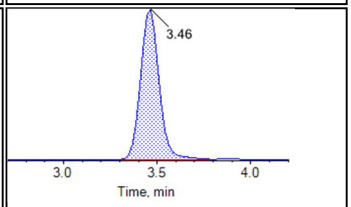
13C4-PFHpA



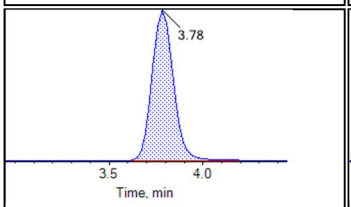
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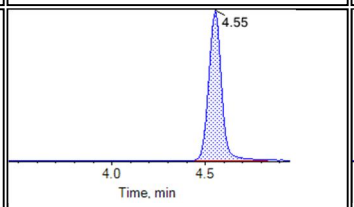
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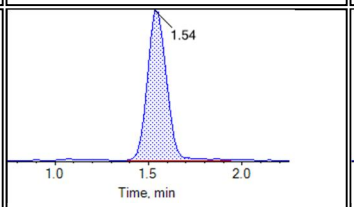
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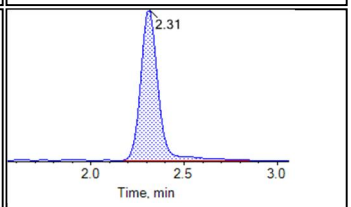
13C7-PFUnA



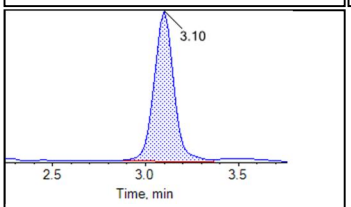
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



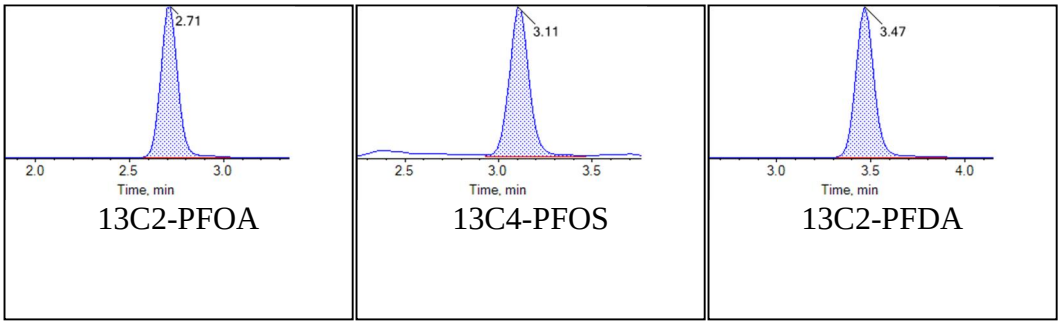
13C8-PFOS

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Internal Standards:



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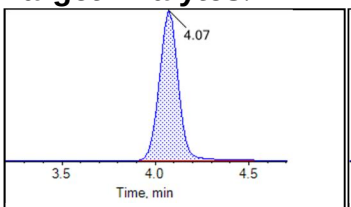
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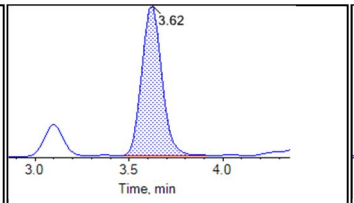
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Sample ID	L6	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:34:28	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

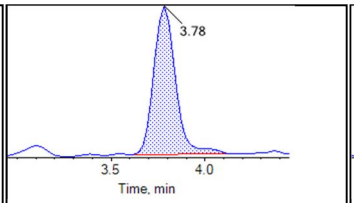
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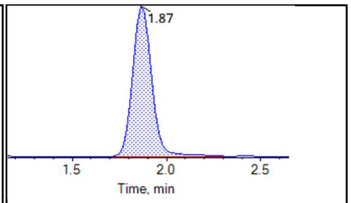
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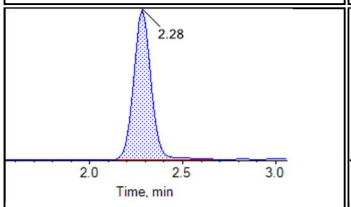
d3-MeFOSAA



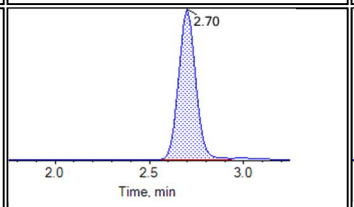
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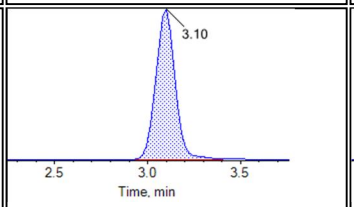
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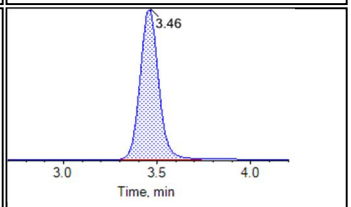
13C4-PFHpA



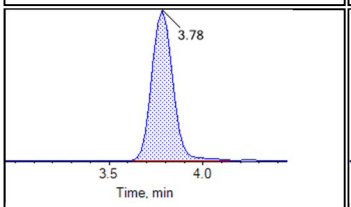
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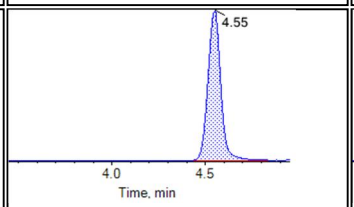
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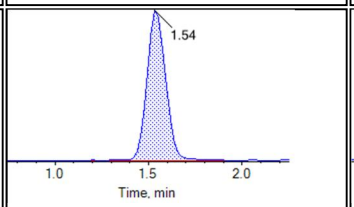
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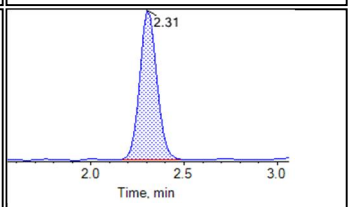
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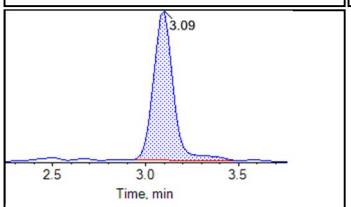
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



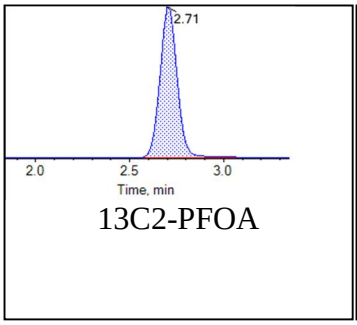
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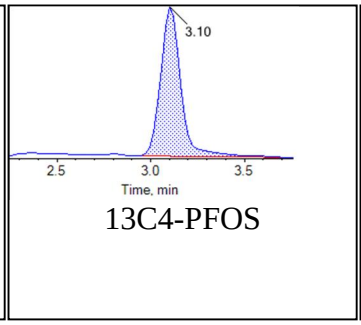
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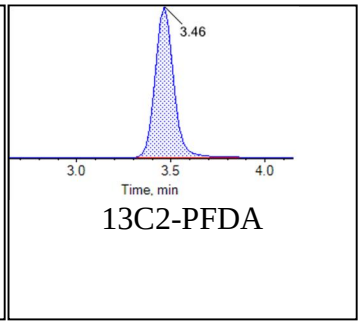
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

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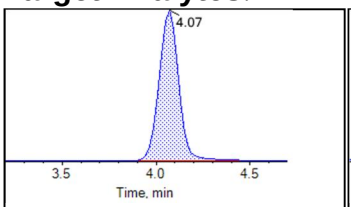
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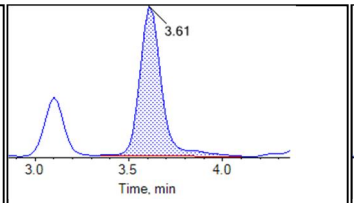
Sample Name	KB79	**Injection Vial**	8
Sample ID	L7	**Injection Volume**	10.00
Sample Type	Standard	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:45:19	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

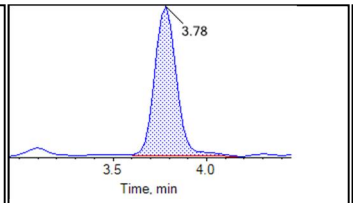
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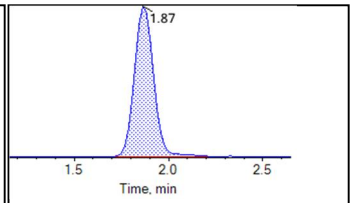
13C2-PFDoA



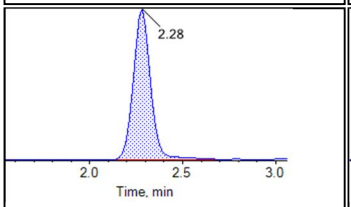
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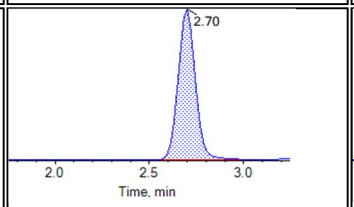
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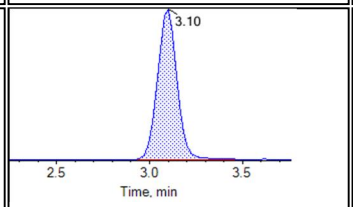
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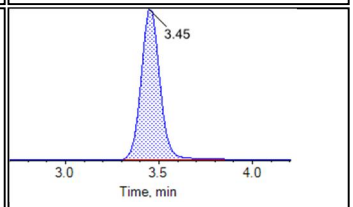
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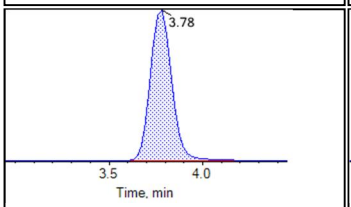
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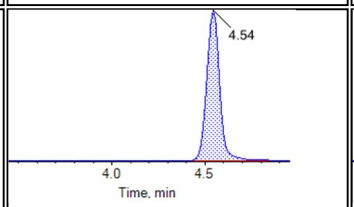
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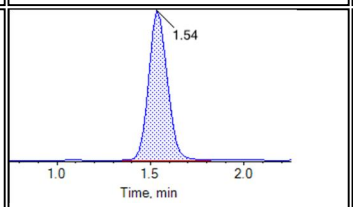
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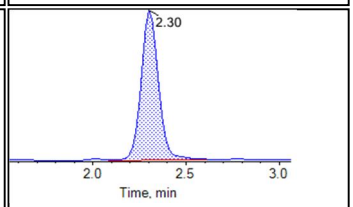
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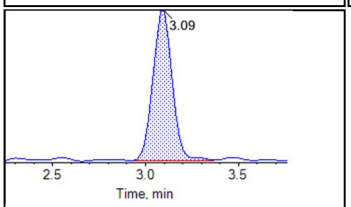
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



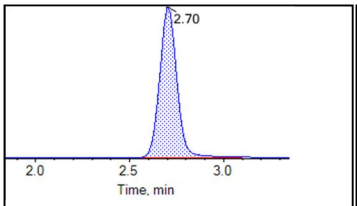
13C8-PFOS

BATTELLE

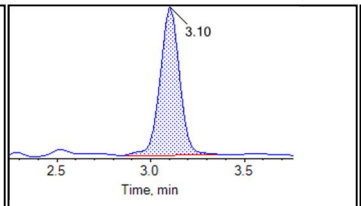
Chromatogram Report

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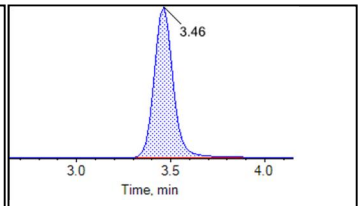
Internal Standards:



13C2-PFOA



13C4-PFOS



13C2-PFDA

BATTELLE

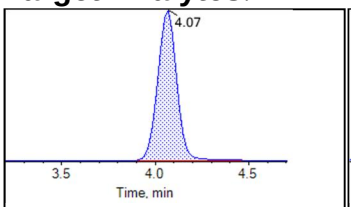
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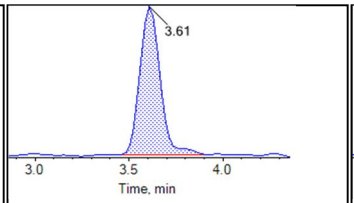
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Sample ID	Instrument Blank	**Injection Volume**	10.00
Sample Type	Unknown	**Instrument Name**	QTRAP 5500
Acquisition Date	2018-10-08T16:56:10	**Data File**	18-0601.wiff
Acquisition Method	5-0369.dam	**Result Table**	18-0581_18-0584_SIS
Sample Comment			

Chromatograms

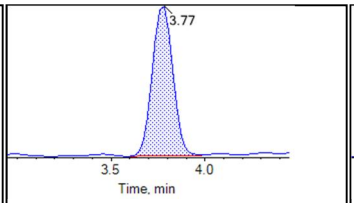
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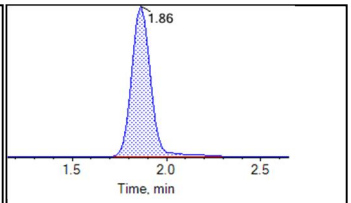
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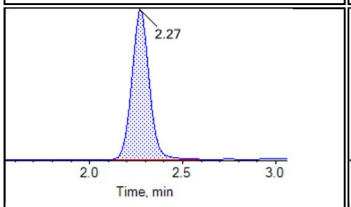
d3-MeFOSAA



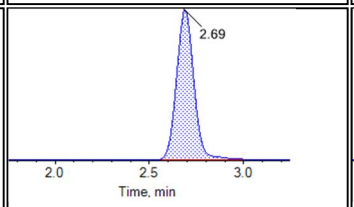
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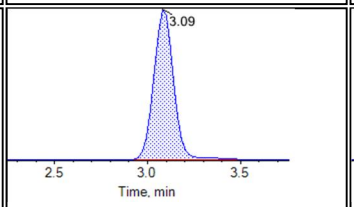
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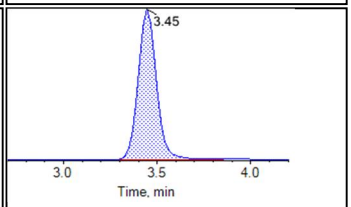
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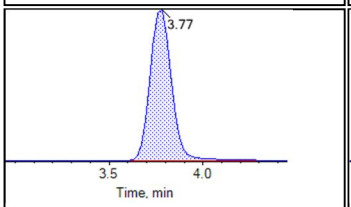
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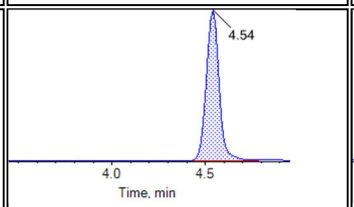
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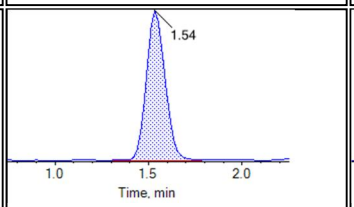
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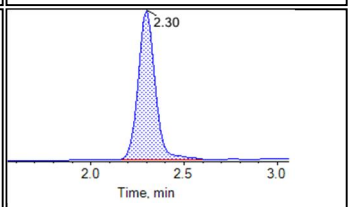
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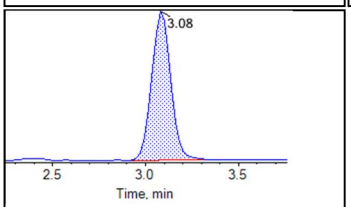
13C2-PFTeDA



13C3-PFBS



13C3-PFHxS



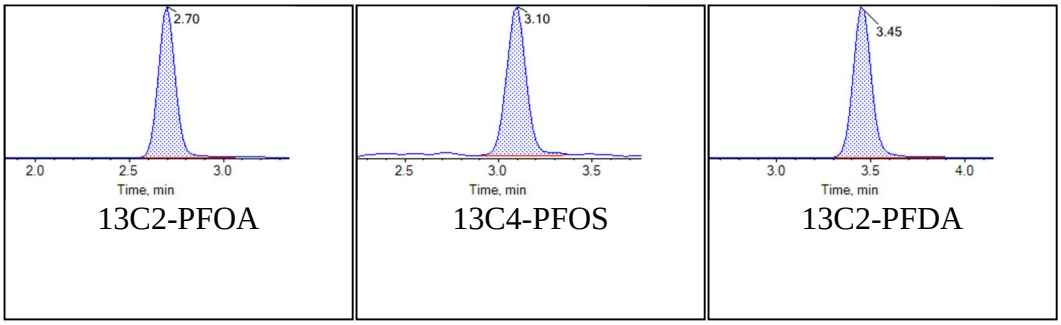
13C8-PFOS

BATTELLE

Chromatogram Report

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Internal Standards:



EDD

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Nu	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	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
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N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	Perfluoro	375-85-9	0.98	NG_L	U		TRG					20171116		0.43	0.43	5.1	70	0.98	4.88	18-0584	DP-18-0289		
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N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	13C6-PFD	ABDO-2222	118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	13C7-PFU	nBDO-2223	126	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	13C2-PFD	oBDO-2112	118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	13C2-PFT	e BDO-2224	108	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	d3-MeFOS	BDO-1838	110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	d5-EtFOSA	BDO-1839	136	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	13C3-PFB	S BDO-2226	120	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	13C3-PFH	x BDO-2227	123	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR892PB-F	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BLK	SD	4	20181002	20181002			20181002	16:17:00	20181008	21:49:26	CR892PB-F	10	1	0	13C8-PFO	SBDO-2228	119	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluoroh	307-24-4	79	PCT_REC			TRG	LSA	135	45	20171116		0.32	0.32	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluoro	375-85-9	84	PCT_REC			TRG	LSA	128	60	20171116		0.43	0.43	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluoroo	335-67-1	90	PCT_REC			TRG	LSA	136	56	20171116		0.49	0.49	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluoro	375-95-1	80	PCT_REC			TRG	LSA	130	54	20171116		0.42	0.42	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluorod	335-76-2	91	PCT_REC			TRG	LSA	141	55	20171116		0.26	0.26	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluorou	2058-94-8	84	PCT_REC			TRG	LSA	137	57	20171116		0.4	0.4	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluorod	307-55-1	88	PCT_REC			TRG	LSA	134	62	20171116		0.24	0.24	5.1		0.49	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluorot	r72629-94-8	84	PCT_REC			TRG	LSA	127	51	20171116		0.27	0.27	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluorot	376-06-7	86	PCT_REC			TRG	LSA	162	34	20171116		0.62	0.62	5.1		1.96	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	N-Methyl	FZ355-31-9	79	PCT_REC			TRG	LSA	146	52	20171116		1.1	1.1	5.1		2.45	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	N-Ethyl Pe	r2991-50-6	75	PCT_REC			TRG	LSA	124	54	20171116		0.56	0.56	5.1		1.96	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluorob	375-73-5	84	PCT_REC			TRG	LSA	145	57	20171116		0.35	0.35	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluoro	355-46-4	81	PCT_REC			TRG	LSA	132	52	20171116		0.22	0.22	5.1		0.49	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	Perfluoroo	1763-23-1	88	PCT_REC			TRG	LSA	130	50	20171116		0.26	0.26	5.1		0.98	4.9	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C5-PFH	x BDO-2217	120	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C4-PFH	pBDO-2218	114	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C8-PFO	ABDO-2219	112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C9-PFN	ABDO-2221	116	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C6-PFD	ABDO-2222	106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C7-PFU	nBDO-2223	109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C2-PFD	oBDO-2112	109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C2-PFT	e BDO-2224	115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	d3-MeFOS	BDO-1838	121	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	d5-EtFOSA	BDO-1839	111	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C3-PFB	S BDO-2226	117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C3-PFH	x BDO-2227	115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	CR893LCS-	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	BS	SD	4	20181002	20181002			20181002	16:17:00	20181008	22:00:19	CR893LCS-	10	1	0	13C8-PFO	SBDO-2228	104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	22:11:10	J8352-FS	10	1	5.47	Perfluoroh	307-24-4	67.3	NG_L			TRG					20171116		0.34	0.34	5.1	70	1.03	5.13	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	22:11:10	J8352-FS	10	1	5.47	Perfluoro	375-85-9	12.19	NG_L			TRG					20171116		0.45	0.45	5.1	70	1.03	5.13	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	22:11:10	J8352-FS	10	1	5.47	Perfluoroo	335-67-1	13.05	NG_L			TRG					20171116		0.51	0.51	5.1	70	1.03	5.13	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	22:11:10	J8352-FS	10	1	5.47	Perfluoro	375-95-1	2.88	NG_L	J		TRG					20171116		0.44	0.44	5.1	70	1.03	5.13	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	22:11:10	J8352-FS	10	1	5.47	Perfluorod	335-76-2	4.42	NG_L	J		TRG					20171116		0.28	0.28	5.1	70	1.03	5.13	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	22:11:10	J8352-FS	10	1	5.47	Perfluorou	2058-94-8	0.98	NG_L	J		TRG					20171116		0.42	0.42	5.1	70	1.03	5.13	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	22:11:10	J8352-FS	10	1	5.47	Perfluorod	307-55-1	0.33	NG_L	J		TRG					20171116		0.25	0.25	5.1	70	0.51	5.13	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	22:11:10	J8352-FS	10	1	5.47	Perfluorot	r72629-94-8	1.03	NG_L	U		TRG					20171116		0.29	0.29	5.1	70	1.03	5.13	18-0584	DP-18-0289		
N6247016	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	BATT

EDD

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Ni	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction	Extraction	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	GC_Colum	Analysis_R	Result_Nar	QC_Contro	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL		Detection_Q	SM_Vers	DL		LOD		LOQ		SDG	Analysis_B	Validator_	Val_Date
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		Perfluorot	376-06-7	2.2	NG_L	U		TRG					20171116		0.69	0.69	5.1	70	2.2	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		N-Methyl	FZ355-31-9	2.75	NG_L	U		TRG					20171116		1.23	1.23	5.1	70	2.75	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		N-Ethyl Pe	r2991-50-6	2.2	NG_L	U		TRG					20171116		0.63	0.63	5.1	70	2.2	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		Perfluorob	375-73-5	6.28	NG_L			TRG					20171116		0.4	0.4	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		Perfluoroh	355-46-4	27.94	NG_L			TRG					20171116		0.24	0.24	5.1	70	0.55	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:05:28	J8354-FS	100	1	6.93		Perfluoroo	1763-23-1	769.46	NG_L	D		TRG					20171116		2.97	2.97	5.1	70	10.99	54.95	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		13C5-PFH	x BDO-2217	120	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		13C4-PFH	p BDO-2218	119	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		13C8-PFO	A BDO-2219	103	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		13C9-PFN	A BDO-2221	80	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		13C6-PFD	A BDO-2222	108	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:05:28	J8354-FS	100	1	6.93		13C7-PFU	n BDO-2223	113	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:05:28	J8354-FS	100	1	6.93		13C2-PFD	o BDO-2112	104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:05:28	J8354-FS	100	1	6.93		13C2-PFT	e BDO-2224	105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		d3-MeFOS	BDO-1838	132	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		d5-EtFOSA	BDO-1839	139	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		13C3-PFB	S BDO-2226	145	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	22:54:37	J8354-FS	10	1	6.93		13C3-PFH	x BDO-2227	148	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	DL1	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:05:28	J8354-FS	100	1	6.93		13C8-PFO	S BDO-2228	101	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluoroh	307-24-4	1.03	NG_L	U		TRG					20171116		0.34	0.34	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluoroh	375-85-9	1.03	NG_L	U		TRG					20171116		0.45	0.45	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluoro	335-67-1	1.03	NG_L	U		TRG					20171116		0.52	0.52	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluoro	375-95-1	1.03	NG_L	U		TRG					20171116		0.44	0.44	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluorod	335-76-2	1.03	NG_L	U		TRG					20171116		0.28	0.28	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluorou	2058-94-8	1.03	NG_L	U		TRG					20171116		0.42	0.42	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluorod	307-55-1	0.52	NG_L	U		TRG					20171116		0.25	0.25	5.1	70	0.52	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluorot	72629-94-8	1.03	NG_L	U		TRG					20171116		0.29	0.29	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluorot	376-06-7	2.06	NG_L	U		TRG					20171116		0.65	0.65	5.1	70	2.06	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		N-Methyl	FZ355-31-9	2.58	NG_L	U		TRG					20171116		1.15	1.15	5.1	70	2.58	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		N-Ethyl Pe	r2991-50-6	2.06	NG_L	U		TRG					20171116		0.59	0.59	5.1	70	2.06	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluorob	375-73-5	1.03	NG_L	U		TRG					20171116		0.37	0.37	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluoroh	355-46-4	5.05	NG_L	J		TRG					20171116		0.23	0.23	5.1	70	0.52	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		Perfluoroo	1763-23-1	42.65	NG_L			TRG					20171116		0.28	0.28	5.1	70	1.03	5.15	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C5-PFH	x BDO-2217	105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C4-PFH	p BDO-2218	104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C8-PFO	A BDO-2219	115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C9-PFN	A BDO-2221	97	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C6-PFD	A BDO-2222	107	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C7-PFU	n BDO-2223	109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C2-PFD	o BDO-2112	99	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C2-PFT	e BDO-2224	95	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		d3-MeFOS	BDO-1838	76	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		d5-EtFOSA	BDO-1839	101	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C3-PFB	S BDO-2226	119	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C3-PFH	x BDO-2227	115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181008	23:16:20	J8355-FS	10	1	4.79		13C8-PFO	S BDO-2228	115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluoroh	307-24-4	1.02	NG_L	U		TRG					20171116		0.34	0.34	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluoroh	375-85-9	1.02	NG_L	U		TRG					20171116		0.45	0.45	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluoro	335-67-1	1.02	NG_L	U		TRG					20171116		0.51	0.51	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluoro	375-95-1	1.02	NG_L	U		TRG					20171116		0.44	0.44	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluorod	335-76-2	1.02	NG_L	U		TRG					20171116		0.27	0.27	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluorou	2058-94-8	1.02	NG_L	U		TRG					20171116		0.42	0.42	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluorod	307-55-1	0.51	NG_L	U		TRG					20171116		0.24	0.24	5.1	70	0.51	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluorot	72629-94-8	1.02	NG_L	U		TRG					20171116		0.28	0.28	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluorot	376-06-7	2.03	NG_L	U		TRG					20171116		0.64	0.64	5.1	70	2.03	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		N-Methyl	FZ355-31-9	2.54	NG_L	U		TRG					20171116		1.14	1.14	5.1	70	2.54	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		N-Ethyl Pe	r2991-50-6	2.03	NG_L	U		TRG					20171116		0.58	0.58	5.1	70	2.03	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluorob	375-73-5	1.02	NG_L	U		TRG					20171116		0.37	0.37	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluoroh	355-46-4	0.52	NG_L	U		TRG					20171116		0.23	0.23	5.1	70	0.52	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		Perfluoroo	1763-23-1	35.69	NG_L			TRG					20171116		0.27	0.27	5.1	70	1.02	5.08	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		13C5-PFH	x BDO-2217	105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM323	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181008	23:27:10	J8356-FS	10	1	4.54		13C4-PFH	p BDO-2218	103	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Ni	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction	Extraction	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	GC_Colum	Analysis_R	Result_Nat	QC_Contro	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL	Detection_	QSM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_	Val_Date
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C8-PFO	A BDO-2219		114	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C9-PFN	A BDO-2221		107	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C6-PFD	A BDO-2222		117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C7-PFU	nDO-2223		128	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C2-PFD	oDO-2112		117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C2-PFT	e BDO-2224		117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		d3-MeFOS	BDO-1838		102	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		d5-EtFOS	A BDO-1839		102	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C3-PFB	S BDO-2226		97	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C3-PFH	x BDO-2227		109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:10:35	J8360-FS	10	1	8.28		13C8-PFO	S BDO-2228		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	h 307-24-4		1.1	NG_L	U		TRG				20171116	0.36	0.36	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	h 375-85-9		1.1	NG_L	U		TRG				20171116	0.48	0.48	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	o 335-67-1		1.1	NG_L	U		TRG				20171116	0.55	0.55	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	n 375-95-1		1.1	NG_L	U		TRG				20171116	0.47	0.47	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	d 335-76-2		1.1	NG_L	U		TRG				20171116	0.3	0.3	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	u 2058-94-8		1.1	NG_L	U		TRG				20171116	0.45	0.45	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	d 307-55-1		0.55	NG_L	U		TRG				20171116	0.26	0.26	5.1	70	0.55	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	t 72629-94-8		1.1	NG_L	U		TRG				20171116	0.31	0.31	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	t 376-06-7		2.2	NG_L	U		TRG				20171116	0.69	0.69	5.1	70	2.2	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		N-Methyl	FOSS-31-9		2.75	NG_L	U		TRG				20171116	1.23	1.23	5.1	70	2.75	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		N-Ethyl P	er2991-50-6		2.2	NG_L	U		TRG				20171116	0.63	0.63	5.1	70	2.2	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	b 375-73-5		1.1	NG_L	U		TRG				20171116	0.4	0.4	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	h 355-46-4		0.55	NG_L	U		TRG				20171116	0.24	0.24	5.1	70	0.55	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		Perfluoro	o 1763-23-1		0.34	NG_L	J		TRG				20171116	0.3	0.3	5.1	70	1.1	5.49	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C5-PFH	x BDO-2217		104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C4-PFH	p BDO-2218		105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C8-PFO	A BDO-2219		104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C9-PFN	A BDO-2221		99	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C6-PFD	A BDO-2222		112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C7-PFU	nDO-2223		121	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C2-PFD	oDO-2112		102	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C2-PFT	e BDO-2224		107	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		d3-MeFOS	BDO-1838		124	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		d5-EtFOS	A BDO-1839		131	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C3-PFB	S BDO-2226		121	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C3-PFH	x BDO-2227		122	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:21:28	J8361-FS	10	1	5.98		13C8-PFO	S BDO-2228		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	h 307-24-4		1.07	NG_L	U		TRG				20171116	0.35	0.35	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	h 375-85-9		1.07	NG_L	U		TRG				20171116	0.47	0.47	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	o 335-67-1		1.07	NG_L	U		TRG				20171116	0.53	0.53	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	n 375-95-1		1.07	NG_L	U		TRG				20171116	0.46	0.46	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	d 335-76-2		1.07	NG_L	U		TRG				20171116	0.29	0.29	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	u 2058-94-8		1.07	NG_L	U		TRG				20171116	0.44	0.44	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	d 307-55-1		0.53	NG_L	U		TRG				20171116	0.26	0.26	5.1	70	0.53	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	t 72629-94-8		1.07	NG_L	U		TRG				20171116	0.3	0.3	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	t 376-06-7		2.14	NG_L	U		TRG				20171116	0.67	0.67	5.1	70	2.14	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		N-Methyl	FOSS-31-9		2.67	NG_L	U		TRG				20171116	1.2	1.2	5.1	70	2.67	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		N-Ethyl P	er2991-50-6		2.14	NG_L	U		TRG				20171116	0.61	0.61	5.1	70	2.14	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	b 375-73-5		1.07	NG_L	U		TRG				20171116	0.39	0.39	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	h 355-46-4		0.53	NG_L	U		TRG				20171116	0.24	0.24	5.1	70	0.53	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:32:20	J8362-FS	10	1	7.8		Perfluoro	o 1763-23-1		0.48	NG_L	J		TRG				20171116	0.29	0.29	5.1	70	1.07	5.35	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C5-PFH	x BDO-2217		92	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C4-PFH	p BDO-2218		93	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C8-PFO	A BDO-2219		104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C9-PFN	A BDO-2221		107	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C6-PFD	A BDO-2222		119	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C7-PFU	nDO-2223		130	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C2-PFD	oDO-2112		112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C2-PFT	e BDO-2224		104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		d3-MeFOS	BDO-1838		126	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		d5-EtFOS	A BDO-1839		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C3

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Nu	CH2M_Cor	Analysis_G	Analytical_PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	QC_Colum	Analysis_R	Result_Nar	QC_Contrc	QC_Accura	QC_Accur	Control_Lir	QC_Narrat	MDL	Detection_	QSM_Vers	DL	LOD	LOQ	SDG	Analysis_B	Validator_	Val_Date
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C3-PFBS	BDO-2226		117	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	00:54:04	J8364-FS	10	1	3.28		13C3-PFHx	BDO-2227		125	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:04:56	J8364-FS	50	1	3.28		13C8-PFOS	BDO-2228		88	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluoroh	307-24-4		1.27	NG_L	U		TRG				20171116	0.42	0.42	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluoroh	375-85-9		1.27	NG_L	U		TRG				20171116	0.56	0.56	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluoroo	335-67-1		1.27	NG_L	U		TRG				20171116	0.63	0.63	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluoro	375-95-1		1.27	NG_L	U		TRG				20171116	0.54	0.54	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluorod	335-76-2		1.27	NG_L	U		TRG				20171116	0.34	0.34	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluorou	2058-94-8		1.27	NG_L	U		TRG				20171116	0.52	0.52	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluorod	307-55-1		0.63	NG_L	U		TRG				20171116	0.3	0.3	5.1	70	0.63	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluorot	72629-94-8		1.27	NG_L	U		TRG				20171116	0.35	0.35	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluorot	376-06-7		2.53	NG_L	U		TRG				20171116	0.8	0.8	5.1	70	2.53	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		N-Methyl	FOSA-31-9		3.16	NG_L	U		TRG				20171116	1.42	1.42	5.1	70	3.16	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		N-Ethyl	Per2991-50-6		2.53	NG_L	U		TRG				20171116	0.72	0.72	5.1	70	2.53	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluorob	375-73-5		1.27	NG_L	U		TRG				20171116	0.46	0.46	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluoroh	355-46-4		1.16	NG_L	J		TRG				20171116	0.28	0.28	5.1	70	0.63	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		Perfluoro	1763-23-1		4.26	NG_L	J		TRG				20171116	0.34	0.34	5.1	70	1.27	6.33	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C5-PFHx	BDO-2217		98	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C4-PFHp	BDO-2218		103	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C8-PFOA	BDO-2219		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C9-PFNA	BDO-2221		104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C6-PFDA	BDO-2222		108	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C7-PFUn	BDO-2223		113	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C2-PFDo	BDO-2112		106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C2-PFTe	BDO-2224		103	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		d3-MeFOS	BDO-1838		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		d5-EtFOSA	BDO-1839		137	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C3-PFBS	BDO-2226		111	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C3-PFHx	BDO-2227		125	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SB	4	20180924	20180927			20181002	16:17:00	20181009	01:15:48	J8365-FS	10	1	21.35		13C8-PFOS	BDO-2228		118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		Perfluoroh	307-24-4		92	PCT_REC			TRG	LSA	135	45	20171116	0.35	0.35	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		Perfluoroh	375-85-9		82	PCT_REC			TRG	LSA	128	60	20171116	0.47	0.47	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:37:33	J8366MS-F	50	1	3.21		Perfluoroo	335-67-1		110	PCT_REC			TRG	LSA	136	56	20171116	2.67	2.67	5.1		5.35	26.74	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		Perfluoro	375-95-1		80	PCT_REC			TRG	LSA	130	54	20171116	0.46	0.46	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:37:33	J8366MS-F	50	1	3.21		Perfluorod	335-76-2		116	PCT_REC			TRG	LSA	141	55	20171116	1.44	1.44	5.1		5.35	26.74	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:37:33	J8366MS-F	50	1	3.21		Perfluorou	2058-94-8		108	PCT_REC			TRG	LSA	137	57	20171116	2.19	2.19	5.1		5.35	26.74	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		Perfluorod	307-55-1		82	PCT_REC			TRG	LSA	134	62	20171116	0.26	0.26	5.1		0.53	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		Perfluorot	72629-94-8		85	PCT_REC			TRG	LSA	127	51	20171116	0.3	0.3	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		Perfluorot	376-06-7		85	PCT_REC			TRG	LSA	162	34	20171116	0.67	0.67	5.1		2.14	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		N-Methyl	FOSA-31-9		75	PCT_REC			TRG	LSA	146	52	20171116	1.2	1.2	5.1		2.67	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		N-Ethyl	Per2991-50-6		78	PCT_REC			TRG	LSA	124	54	20171116	0.61	0.61	5.1		2.14	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		Perfluorob	375-73-5			PCT_REC			TRG	LSA	145	57	20171116	0.39	0.39	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		Perfluoroh	355-46-4			PCT_REC			TRG	LSA	132	52	20171116	0.24	0.24	5.1		0.53	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:37:33	J8366MS-F	50	1	3.21		Perfluoro	1763-23-1			PCT_REC			TRG	LSA	130	50	20171116	1.44	1.44	5.1		5.35	26.74	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		13C5-PFHx	BDO-2217		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		13C4-PFHp	BDO-2218		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:37:33	J8366MS-F	50	1	3.21		13C8-PFOA	BDO-2219		100	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		13C9-PFNA	BDO-2221		105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		13C6-PFDA	BDO-2222		113	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:37:33	J8366MS-F	50	1	3.21		13C7-PFUn	BDO-2223		96	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:37:33	J8366MS-F	50	1	3.21		13C2-PFDo	BDO-2112		96	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		13C2-PFTe	BDO-2224		131	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		d3-MeFOS	BDO-1838		146	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		d5-EtFOSA	BDO-1839		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		13C3-PFBS	BDO-2226		142	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:26:41	J8366MS-F	10	1	3.21		13C3-PFHx	BDO-2227		132	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	DL1	MS	SB	4	20181002	20181002			20181002	16:17:00	20181009	01:37:33	J8366MS-F	50	1	3.21		13C8-PFOS	BDO-2228		96	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MSD	SB	4	20181002	20181002			20181002	16:17:00	20181009	02:10:07	J8367MSD	10	1	3.18		Perfluoroh	307-24-4		86	PCT_REC			TRG	LSA	135	45	20171116	0.35	0.35	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MSD	SB	4	20181002	20181002			20181002	16:17:00	20181009	02:10:07	J8367MSD	10	1	3.18		Perfluoroh	375-85-9		84	PCT_REC			TRG	LSA	128	60	20171116	0.47	0.47	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MSD	SB	4	20181002	20181002			20181002	16:17:00	20181009	02:10:07	J8367MSD	10	1	3.18		Perfluoroo	335-67-1		101	PCT_REC			TRG	LSA	136	56	20171116	0.53	0.53	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MSD	SB	4	20181002	20181002			20181002	16:17:00	20181009	02:10:07	J8367MSD	10	1	3.18		Perfluoro	375-95-1		86	PCT_REC			TRG	LSA	130	54	20171116	0.46	0.46	5.1		1.07	5.35	18-0584	DP-18-0289		
N6247016(	41641		POINT_MU	VC-PM324	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	MSD	SB	4	20181002	20181002			20181002	16:17:00	20181009	02:10:07	J8367MSD	10	1	3.18		Perfluorod	335-76-2		104	PCT_REC			TRG	LSA	141	55	20171116	0.29	0.29	5.1		1.07	5.35	18-

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Nu	CH2M_Cor	Analysis_G	Analytical_	PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_TY	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_Nar	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL		Detection_	QSM_Vers	DL		LOD		LOQ		SDG	Analysis_B	Validator_I	Val_Date
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	20181009	02:42:42	J8374-FS	10	1	4.27		Perfluorou	2058-94-8		1.02	NG_L	U		TRG					20171116		0.42	0.42	5.1	70	1.02	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		Perfluorod	307-55-1		0.51	NG_L	U		TRG					20171116		0.24	0.24	5.1	70	0.51	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		Perfluorot	72629-94-8		1.02	NG_L	U		TRG					20171116		0.28	0.28	5.1	70	1.02	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		Perfluorot	376-06-7		2.03	NG_L	U		TRG					20171116		0.64	0.64	5.1	70	2.03	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		N-Methyl F	2355-31-9		2.54	NG_L	U		TRG					20171116		1.14	1.14	5.1	70	2.54	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		N-Ethyl Pe	r2991-50-6		2.03	NG_L	U		TRG					20171116		0.58	0.58	5.1	70	2.03	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		Perfluorob	375-73-5		1.02	NG_L	U		TRG					20171116		0.37	0.37	5.1	70	1.02	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		Perfluoroh	355-46-4		0.51	NG_L	U		TRG					20171116		0.22	0.22	5.1	70	0.51	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		Perfluoroo	1763-23-1		11.48	NG_L			TRG					20171116		0.27	0.27	5.1	70	1.02	5.08	18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C5-PFHx	BDO-2217		106	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C4-PFHp	BDO-2218		113	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C8-PFOA	BDO-2219		118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C9-PFNA	BDO-2221		107	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C6-PFDA	BDO-2222		105	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C7-PFUn	BDO-2223		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C2-PFDo	BDO-2112		103	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C2-PFTe	BDO-2224		102	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		d3-MeFOS	BDO-1838		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		d5-EtFOSA	BDO-1839		129	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C3-PFBS	BDO-2226		114	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C3-PFHx	BDO-2227		119	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:42:42	J8374-FS	10	1	4.27		13C8-PFOS	BDO-2228		123	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluoroh	307-24-4		1.26	NG_L	U		TRG					20171116		0.42	0.42	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorob	375-85-9		1.26	NG_L	U		TRG					20171116		0.55	0.55	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorod	335-67-1		1.26	NG_L	U		TRG					20171116		0.63	0.63	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorob	375-95-1		1.26	NG_L	U		TRG					20171116		0.54	0.54	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorod	335-76-2		1.26	NG_L	U		TRG					20171116		0.34	0.34	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorou	2058-94-8		1.26	NG_L	U		TRG					20171116		0.52	0.52	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorod	307-55-1		0.63	NG_L	U		TRG					20171116		0.3	0.3	5.1	70	0.63	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorot	72629-94-8		1.26	NG_L	U		TRG					20171116		0.35	0.35	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorot	376-06-7		2.52	NG_L	U		TRG					20171116		0.79	0.79	5.1	70	2.52	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		N-Methyl F	2355-31-9		3.14	NG_L	U		TRG					20171116		1.41	1.41	5.1	70	3.14	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		N-Ethyl Pe	r2991-50-6		2.52	NG_L	U		TRG					20171116		0.72	0.72	5.1	70	2.52	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluorob	375-73-5		1.26	NG_L	U		TRG					20171116		0.45	0.45	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluoroh	355-46-4		0.38	NG_L	J		TRG					20171116		0.28	0.28	5.1	70	0.63	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		Perfluoroo	1763-23-1		0.76	NG_L	J		TRG					20171116		0.34	0.34	5.1	70	1.26	6.29	18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C5-PFHx	BDO-2217		96	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C4-PFHp	BDO-2218		98	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C8-PFOA	BDO-2219		104	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C9-PFNA	BDO-2221		99	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C6-PFDA	BDO-2222		112	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C7-PFUn	BDO-2223		123	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C2-PFDo	BDO-2112		110	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C2-PFTe	BDO-2224		109	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		d3-MeFOS	BDO-1838		118	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		d5-EtFOSA	BDO-1839		125	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C3-PFBS	BDO-2226		115	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C3-PFHx	BDO-2227		107	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
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	20181009	02:53:33	J8375-FS	10	1	20.93		13C8-PFOS	BDO-2228		113	PCT_REC			SURR	SLSP	150	50	20171116				5.1				18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluoroh	307-24-4		2.19	NG_L	J		TRG					20171116		0.36	0.36	5.1	70	1.09	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorob	375-85-9		1	NG_L	J		TRG					20171116		0.48	0.48	5.1	70	1.09	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorod	335-67-1		1.72	NG_L	J		TRG					20171116		0.54	0.54	5.1	70	1.09	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorob	375-95-1		1.09	NG_L	U		TRG					20171116		0.47	0.47	5.1	70	1.09	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorod	335-76-2		0.33	NG_L	J		TRG					20171116		0.29	0.29	5.1	70	1.09	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorou	2058-94-8		1.09	NG_L	U		TRG					20171116		0.45	0.45	5.1	70	1.09	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorod	307-55-1		0.54	NG_L	U		TRG					20171116		0.26	0.26	5.1	70	0.54	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorot	72629-94-8		1.09	NG_L	U		TRG					20171116		0.3	0.3	5.1	70	1.09	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorot	376-06-7		2.17	NG_L	U		TRG					20171116		0.68	0.68	5.1	70	2.17	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		N-Methyl F	2355-31-9		2.72	NG_L	U		TRG					20171116		1.22	1.22	5.1	70	2.72	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		N-Ethyl Pe	r2355-50-9		2.17	NG_L	U		TRG					20171116		0.62	0.62	5.1	70	2.17	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:04:26	J8376-FS	10	1	8.5		Perfluorob	375-73-5		0.65	NG_L	J		TRG					20171116		0.39	0.39	5.1	70	1.09	5.43	18-0584	DP-18-0289		
N6247016I	4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD_	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181

Contract_I	DO_CTO_N	Phase	Installatior	Sample_Ni	CH2M_Coc	Analysis_G	Analytical_PRC_Code	Lab_Code	Lab_Name	Leachate_I	SAMPLE_B	Extraction_	Result_Typ	Lab_QC_ty	SAMPLE_N	QC_Level	DateTime_	Date_Rece	Leachate_I	Leachate_	Extraction_	Extraction_	Analysis_D	Analysis_T	Lab_Sampl	Dilution	Run_Numt	PERCENT_I	PERCENT_I	Chem_Nan	Analyte_ID	Analyte_Vi	Original_A	Result_Uni	Lab_Qualif	Validator_	GC_Colum	Analysis_R	Result_Nat	QC_Contrc	QC_Accura	QC_Accura	Control_Lir	QC_Narrat	MDL		Detection_	QSM_Vers	DL		LOD		LOQ		SDG	Analysis_B	Validator_	Val_Date
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		Perfluoro	o 1763-23-1		47.97	NG_L				TRG					20171116		0.34	0.34	5.1		70	1.26		6.29	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C5-PFH	x BDO-2217		89	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C4-PFH	p BDO-2218		100	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C8-PFO	A BDO-2219		115	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C9-PFN	A BDO-2221		112	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C6-PFD	A BDO-2222		117	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C7-PFU	n BDO-2223		116	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C2-PFD	o BDO-2112		112	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C2-PFT	e BDO-2224		110	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		d3-MeFOS	BDO-1838		117	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		d5-EtFOS	A BDO-1839		133	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C3-PFB	S BDO-2226		124	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C3-PFH	x BDO-2227		119	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:26:11	J8378-FS	10	1	19.76		13C8-PFO	S BDO-2228		116	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	h 307-24-4		1.02	NG_L	U			TRG					20171116		0.34	0.34	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	h 375-85-9		1.02	NG_L	U			TRG					20171116		0.45	0.45	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	o 335-67-1		1.02	NG_L	U			TRG					20171116		0.51	0.51	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	n 375-95-1		1.02	NG_L	U			TRG					20171116		0.44	0.44	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	d 335-76-2		1.02	NG_L	U			TRG					20171116		0.27	0.27	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	u 2058-94-8		1.02	NG_L	U			TRG					20171116		0.42	0.42	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	d 307-55-1		0.51	NG_L	U			TRG					20171116		0.24	0.24	5.1		70	0.51		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluorot	72629-94-8		1.02	NG_L	U			TRG					20171116		0.28	0.28	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluorot	x 376-06-7		2.03	NG_L	U			TRG					20171116		0.64	0.64	5.1		70	2.03		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		N-Methyl	F 2355-31-9		2.54	NG_L	U			TRG					20171116		1.14	1.14	5.1		70	2.54		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		N-Ethyl P	er 2991-50-6		2.03	NG_L	U			TRG					20171116		0.58	0.58	5.1		70	2.03		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluorob	375-73-5		1.02	NG_L	U			TRG					20171116		0.37	0.37	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	h 355-46-4		0.65	NG_L	J			TRG					20171116		0.22	0.22	5.1		70	0.51		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		Perfluoro	o 1763-23-1		6.01	NG_L				TRG					20171116		0.27	0.27	5.1		70	1.02		5.08	18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C5-PFH	x BDO-2217		108	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C4-PFH	p BDO-2218		113	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C8-PFO	A BDO-2219		113	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C9-PFN	A BDO-2221		111	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C6-PFD	A BDO-2222		121	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C7-PFU	n BDO-2223		128	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C2-PFD	o BDO-2112		116	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C2-PFT	e BDO-2224		112	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		d3-MeFOS	BDO-1838		114	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		d5-EtFOS	A BDO-1839		124	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C3-PFB	S BDO-2226		123	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C3-PFH	x BDO-2227		127	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 4164		POINT_MU	VC-PM64B	NONS	SVOA	537_MOD	ORG	BMSL_NO	FBATTELLE,	NULL	DRY	METHOD	000	REG	SS	4	20180924	20180927			20181002	16:17:00	20181009	03:37:04	J8379-FS	10	1	2.39		13C8-PFO	S BDO-2228		116	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	h 307-24-4		0.52	NG_L	J			TRG					20171116		0.34	0.34	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	h 375-85-9		1.03	NG_L	U			TRG					20171116		0.45	0.45	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	o 335-67-1		1.03	NG_L	U			TRG					20171116		0.51	0.51	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	n 375-95-1		1.03	NG_L	U			TRG					20171116		0.44	0.44	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	d 335-76-2		1.03	NG_L	U			TRG					20171116		0.28	0.28	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	u 2058-94-8		1.03	NG_L	U			TRG					20171116		0.42	0.42	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	d 307-55-1		0.51	NG_L	U			TRG					20171116		0.25	0.25	5.1		70	0.51		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluorot	72629-94-8		1.03	NG_L	U			TRG					20171116		0.29	0.29	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluorot	x 376-06-7		2.05	NG_L	U			TRG					20171116		0.65	0.65	5.1		70	2.05		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		N-Methyl	F 2355-31-9		2.56	NG_L	U			TRG					20171116		1.15	1.15	5.1		70	2.56		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		N-Ethyl P	er 2991-50-6		2.05	NG_L	U			TRG					20171116		0.58	0.58	5.1		70	2.05		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluorob	375-73-5		1.03	NG_L	U			TRG					20171116		0.37	0.37	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	h 355-46-4		1.48	NG_L	J			TRG					20171116		0.23	0.23	5.1		70	0.51		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		Perfluoro	o 1763-23-1		8.7	NG_L				TRG					20171116		0.28	0.28	5.1		70	1.03		5.13	18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		13C5-PFH	x BDO-2217		114	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		13C4-PFH	p BDO-2218		108	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		13C8-PFO	A BDO-2219		118	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		13C9-PFN	A BDO-2221		116	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		13C6-PFD	A BDO-2222		125	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584	DP-18-0289		
N624701	6I 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	20181009	03:47:58	J8380-FS	10	1	4.05		13C7-PFU	n BDO-2223		131	PCT_REC				SURR		SLSP	150	50	20171116				5.1						18-0584

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
NAVAL BASE VENTURA COUNTY, CALIFORNIA

Client: CH2M HILL, Inc., Corvallis, Oregon
SDG: 18-0584
Laboratory: Battelle Norwell Operations, Norwell, Massachusetts
Site: Naval Base Ventura County, CTO-4164, California
Date: December 28, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	VC-PM323-SS01-000H	J8352-FS	Soil
2	VC-PM323-SB01-0102	J8353-FS	Soil
3	VC-PM323-SB01-0506	J8354-FS	Soil
4	VC-PM323-SS03-000H	J8355-FS	Soil
5	VC-PM323-SB03-0102	J8356-FS	Soil
6	VC-PM323-SB03-0506	J8357-FS	Soil
7	VC-PM324-SS01-000H	J8360-FS	Soil
8	VC-PM324-SB01-0102	J8361-FS	Soil
9	VC-PM324-SB01-0506	J8362-FS	Soil
10	VC-PM324-SS03-000H	J8363-FS	Soil
11	VC-PM324-SB03-0102	J8364-FS	Soil
11MS	VC-PM324-SB03-0102MS	J8364-FSMS	Soil
11MSD	VC-PM324-SB03-0102MSD	J8364-FSMSD	Soil
12	VC-PM324-SB03-0506	J8365-FS	Soil
13	VC-PM64B-SS01-000H	J8373-FS	Soil
14	VC-PM64B-SB01-0102	J8374-FS	Soil
15	VC-PM64B-SB01-0506	J8375-FS	Soil
16	VC-PM64B-SS02-000H	J8376-FS	Soil
17	VC-PM64B-SB02-0102	J8377-FS	Soil
18	VC-PM64B-SB02-0506	J8378-FS	Soil
19	VC-PM64B-SS03-000H	J8379-FS	Soil
20	VC-PM64B-SB03-0102	J8380-FS	Soil

A full data validation was performed on the analytical data for twenty soil samples collected on September 24, 2018 by CH2M HILL at the Naval Base Ventura County site in California. The samples were analyzed under the Battelle SOP Method for "Analysis of Perfluoroalkyl Substances in Environmental Samples by Liquid Chromatography and Tandem Mass Spectrometry (LC-MS/MS)".

Specific method references are as follows:

Analysis	*Method References*
PFCs	SOP 5-369

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, the DoD Quality Systems Manual for Environmental Laboratories, Version

5.1, February 2018, the Final Sampling and Analysis Plan Basewide Preliminary Assessments/Site Inspections of Per- and Polyfluoroalkyl Substances, August 2018, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratories Program National Functional Guidelines for Organic Superfund Methods Data Review," January 2017;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

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

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

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

Holding Times

- All samples were extracted within 28 days for soil samples and analyzed within 30 days.

LC/MS Tuning

- All criteria were met.

Initial Calibration

- All relative standard deviation (%RSD) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent recovery (%R) criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- Field QC samples are summarized below.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
VC-SO-EB05-09242018	PFHxA	44.45	U	1-3, 10-11, 16-18, 20
	PFHpA	4.71	U	1-3, 16-17
	PFBS	16.43	U	1-3, 16
	PFHxS	133.30	U	1-6, 10-13, 15-20
	PFOS	213.24	U	1-20
VC-SO-FB05-09242018	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 except for the following.

EDS Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier
11	PFOS	OK/OK/58.7	None for RPD alone

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: 12/28/18

Nancy Weaver
Senior Chemist

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limits is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

BATTELLE
It can be done

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

Client ID		VC-PM323-SS01-000H				
Battelle ID		J8352-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		5.47				
Matrix		SS				
Sample Size		1.95				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	67.30	U	0.34	1.03	5.13
PFHpA	375-85-9	12.19	U	0.45	1.03	5.13
PFOA	335-67-1	13.05		0.51	1.03	5.13
PFNA	375-95-1	2.88	J	0.44	1.03	5.13
PFDA	335-76-2	4.42	J	0.28	1.03	5.13
PFUnA	2058-94-8	0.98	J	0.42	1.03	5.13
PFDoA	307-55-1	0.33	J	0.25	0.51	5.13
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.13
PFTeDA	376-06-7	2.05	U	0.65	2.05	5.13
NMeFOSAA	2355-31-9	2.56	U	1.15	2.56	5.13
NEtFOSAA	2991-50-6	2.05	U	0.58	2.05	5.13
PFBS	375-73-5	1.86	U	0.37	1.03	5.13
PFHxS	355-46-4	38.32	U	0.23	0.51	5.13
PFOS	1763-23-1	811.42	D	2.77	10.26	51.28

Surrogate Recoveries (%)

13C5-PFHxA	132
13C4-PFHpA	129
13C8-PFOA	108
13C9-PFNA	90
13C6-PFDA	120
13C7-PFUnA	122
13C2-PFDoA	107
13C2-PFTeDA	111
d3-MeFOSAA	123
d5-EtFOSAA	149
13C3-PFBS	149
13C3-PFHxS	146
13C8-PFOS	95

2

BATTELLE
It can be done

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

Client ID	VC-PM323-SB01-0102
Battelle ID	J8353-FS
Sample Type	SA
Collection Date	09/24/2018
Extraction Date	10/02/2018
Analysis Date	10/08/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	7.31
Matrix	SB
Sample Size	1.92
Size Unit-Basis	g
Units	ng/g_Dry

				MDL	LOD	LOQ	
PFHxA	307-24-4	25.93	U	0.34	1.04	5.21	EBL
PFHpA	375-85-9	5.33	U	0.46	1.04	5.21	EBL
PFOA	335-67-1	16.34		0.52	1.04	5.21	
PFNA	375-95-1	5.12	J	0.45	1.04	5.21	
PFDA	335-76-2	1.70	J	0.28	1.04	5.21	
PFUnA	2058-94-8	1.04	U	0.43	1.04	5.21	
PFDoA	307-55-1	0.52	U	0.25	0.52	5.21	
PFTrDA	72629-94-8	1.04	U	0.29	1.04	5.21	
PFTeDA	376-06-7	2.08	U	0.66	2.08	5.21	
NMeFOSAA	2355-31-9	2.60	U	1.17	2.60	5.21	
NEtFOSAA	2991-50-6	2.08	U	0.59	2.08	5.21	
PFBS	375-73-5	3.48	U	0.38	1.04	5.21	EBL
PFHxS	355-46-4	52.28	U	0.23	0.52	5.21	EBL
PFOS	1763-23-1	777.60		2.81	10.42	52.08	EBL

Surrogate Recoveries (%)

13C5-PFHxA	109
13C4-PFHpA	110
13C8-PFOA	100
13C9-PFNA	91
13C6-PFDA	124
13C7-PFUnA	146
13C2-PFDoA	126
13C2-PFTeDA	125
d3-MeFOSAA	135
d5-EtFOSAA	146
13C3-PFBS	131
13C3-PFHxS	145
13C8-PFOS	87

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BATTELLE
It can be done

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

Client ID	VC-PM323-SB01-0506
Battelle ID	J8354-FS
Sample Type	SA
Collection Date	09/24/2018
Extraction Date	10/02/2018
Analysis Date	10/08/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	6.93
Matrix	SB
Sample Size	1.82
Size Unit-Basis	g
Units	ng/g_Dry

				MDL	LOD	LOQ	
PFHxA	307-24-4	27.34	U	0.36	1.10	5.49	EBL
PFHpA	375-85-9	3.27	U	0.48	1.10	5.49	EBL
PFOA	335-67-1	13.53		0.55	1.10	5.49	
PFNA	375-95-1	1.10	U	0.47	1.10	5.49	
PFDA	335-76-2	3.26	J	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	6.28	U	0.40	1.10	5.49	EBL
PFHxS	355-46-4	27.94	U	0.24	0.55	5.49	EBL
PFOS	1763-23-1	769.46	D	2.97	10.99	54.95	EBL

Surrogate Recoveries (%)

13C5-PFHxA	120
13C4-PFHpA	119
13C8-PFOA	103
13C9-PFNA	80
13C6-PFDA	108
13C7-PFUnA	113
13C2-PFDoA	104
13C2-PFTeDA	105
d3-MeFOSAA	132
d5-EtFOSAA	139
13C3-PFBS	145
13C3-PFHxS	148
13C8-PFOS	101

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BATTELLE
It can be done

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

Client ID		VC-PM323-SS03-000H				
Battelle ID		J8355-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		4.79				
Matrix		SS				
Sample Size		1.94				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ	
PFHxA	307-24-4	1.03	U	0.34	1.03	5.15	
PFHpA	375-85-9	1.03	U	0.45	1.03	5.15	
PFOA	335-67-1	1.03	U	0.52	1.03	5.15	
PFNA	375-95-1	1.03	U	0.44	1.03	5.15	
PFDA	335-76-2	1.03	U	0.28	1.03	5.15	
PFUnA	2058-94-8	1.03	U	0.42	1.03	5.15	
PFDoA	307-55-1	0.52	U	0.25	0.52	5.15	
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.15	
PFTeDA	376-06-7	2.06	U	0.65	2.06	5.15	
NMeFOSAA	2355-31-9	2.58	U	1.15	2.58	5.15	
NEtFOSAA	2991-50-6	2.06	U	0.59	2.06	5.15	
PFBS	375-73-5	1.03	U	0.37	1.03	5.15	
PFHxS	355-46-4	5.05	J U	0.23	0.52	5.15	EBL
PFOS	1763-23-1	42.65	U	0.28	1.03	5.15	EBL

Surrogate Recoveries (%)	
13C5-PFHxA	105
13C4-PFHpA	104
13C8-PFOA	115
13C9-PFNA	97
13C6-PFDA	107
13C7-PFUnA	109
13C2-PFDoA	99
13C2-PFTeDA	95
d3-MeFOSAA	76
d5-EtFOSAA	101
13C3-PFBS	119
13C3-PFHxS	115
13C8-PFOS	115

BATTELLE
it can be done

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

Client ID		VC-PM323-SB03-0102				
Battelle ID		J8356-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		4.54				
Matrix		SB				
Sample Size		1.97				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.02	U	0.34	1.02	5.08
PFHpA	375-85-9	1.02	U	0.45	1.02	5.08
PFOA	335-67-1	1.02	U	0.51	1.02	5.08
PFNA	375-95-1	1.02	U	0.44	1.02	5.08
PFDA	335-76-2	1.02	U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02	U	0.42	1.02	5.08
PFDoA	307-55-1	0.51	U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02	U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03	U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54	U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03	U	0.58	2.03	5.08
PFBS	375-73-5	1.02	U	0.37	1.02	5.08
PFHxS	355-46-4	5.39	u	0.22	0.51	5.08
PFOS	1763-23-1	35.69	u	0.27	1.02	5.08

EBL
EBL

Surrogate Recoveries (%)

13C5-PFHxA	105
13C4-PFHpA	104
13C8-PFOA	104
13C9-PFNA	102
13C6-PFDA	106
13C7-PFUnA	114
13C2-PFDoA	98
13C2-PFTeDA	99
d3-MeFOSAA	112
d5-EtFOSAA	121
13C3-PFBS	121
13C3-PFHxS	122
13C8-PFOS	126

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BATTELLE
It can be done

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

Client ID		VC-PM323-SB03-0506				
Battelle ID		J8357-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/08/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		6.98				
Matrix		SB				
Sample Size		1.90				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.05 U		0.35	1.05	5.26
PFHpA	**375-85-9**	**1.05 U**		**0.46**	**1.05**	**5.26**
PFOA	335-67-1	1.05 U		0.53	1.05	5.26
PFNA	**375-95-1**	**1.05 U**		**0.45**	**1.05**	**5.26**
PFDA	335-76-2	1.05 U		0.28	1.05	5.26
PFUnA	**2058-94-8**	**1.05 U**		**0.43**	**1.05**	**5.26**
PFDoA	307-55-1	0.53 U		0.25	0.53	5.26
PFTrDA	**72629-94-8**	**1.05 U**		**0.29**	**1.05**	**5.26**
PFTeDA	376-06-7	2.11 U		0.66	2.11	5.26
NMeFOSAA	**2355-31-9**	**2.63 U**		**1.18**	**2.63**	**5.26**
NEtFOSAA	2991-50-6	2.11 U		0.60	2.11	5.26
PFBS	**375-73-5**	**1.05 U**		**0.38**	**1.05**	**5.26**
PFHxS	355-46-4	6.93 U		0.23	0.53	5.26
PFOS	**1763-23-1**	**4.72 U**		**0.28**	**1.05**	**5.26**

EBL
EBL

Surrogate Recoveries (%)

13C5-PFHxA	113
13C4-PFHpA	**110**
13C8-PFOA	115
13C9-PFNA	**109**
13C6-PFDA	115
13C7-PFUnA	**122**
13C2-PFDoA	112
13C2-PFTeDA	**112**
d3-MeFOSAA	105
d5-EtFOSAA	**115**
13C3-PFBS	107
13C3-PFHxS	**121**
13C8-PFOS	101

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BATTELLE
it can be done

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

Client ID	VC-PM324-SS01-000H			
Battelle ID	J8360-FS			
Sample Type	SA			
Collection Date	09/24/2018			
Extraction Date	10/02/2018			
Analysis Date	10/09/2018			
Analytical Instrument	Sciex 5500 LC/MS/MS			
% Moisture	8.28			
Matrix	SS			
Sample Size	1.91			
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	1.05 U	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 ~~0.47 J~~ U	0.28	1.05	5.24

EBL

Surrogate Recoveries (%)	
13C5-PFHxA	110
13C4-PFHpA	105
13C8-PFOA	114
13C9-PFNA	107
13C6-PFDA	117
13C7-PFUnA	128
13C2-PFDoA	117
13C2-PFTeDA	117
d3-MeFOSAA	102
d5-EtFOSAA	102
13C3-PFBS	97
13C3-PFHxS	109
13C8-PFOS	110

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

Client ID		VC-PM324-SB01-0102			
Battelle ID		J8361-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		5.98			
Matrix		SB			
Sample Size		1.82			
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	0.55 U	0.24	0.55	5.49
PFOS	1763-23-1	1.10 ~~0.34 J~~ U	0.30	1.10	5.49

EBL

Surrogate Recoveries (%)	
13C5-PFHxA	104
13C4-PFHpA	105
13C8-PFOA	104
13C9-PFNA	99
13C6-PFDA	112
13C7-PFUnA	121
13C2-PFDoA	102
13C2-PFTeDA	107
d3-MeFOSAA	124
d5-EtFOSAA	131
13C3-PFBS	121
13C3-PFHxS	122
13C8-PFOS	115

MW 12/28/18

BATTELLE
It can be done

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

Client ID	VC-PM324-SB01-0506
Battelle ID	J8362-FS
Sample Type	SA
Collection Date	09/24/2018
Extraction Date	10/02/2018
Analysis Date	10/09/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	7.80
Matrix	SB
Sample Size	1.87
Size Unit-Basis	g
Units	ng/g_Dry

			MDL	LOD	LOQ	
PFHxA	307-24-4	1.07 U	0.35	1.07	5.35	
PFHpA	375-85-9	1.07 U	0.47	1.07	5.35	
PFOA	335-67-1	1.07 U	0.53	1.07	5.35	
PFNA	375-95-1	1.07 U	0.46	1.07	5.35	
PFDA	335-76-2	1.07 U	0.29	1.07	5.35	
PFUnA	2058-94-8	1.07 U	0.44	1.07	5.35	
PFDoA	307-55-1	0.53 U	0.26	0.53	5.35	
PFTrDA	72629-94-8	1.07 U	0.30	1.07	5.35	
PFTeDA	376-06-7	2.14 U	0.67	2.14	5.35	
NMeFOSAA	2355-31-9	2.67 U	1.20	2.67	5.35	
NEtFOSAA	2991-50-6	2.14 U	0.61	2.14	5.35	
PFBS	375-73-5	1.07 U	0.39	1.07	5.35	
PFHxS	355-46-4	0.53 U	0.24	0.53	5.35	
PFOS	1763-23-1	1.07 ~~0.48 J~~ U	0.29	1.07	5.35	EBL

Surrogate Recoveries (%)

13C5-PFHxA	104
13C4-PFHpA	97
13C8-PFOA	111
13C9-PFNA	107
13C6-PFDA	119
13C7-PFUnA	130
13C2-PFDoA	112
13C2-PFTeDA	104
d3-MeFOSAA	126
d5-EtFOSAA	132
13C3-PFBS	115
13C3-PFHxS	106
13C8-PFOS	107

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

Client ID		VC-PM324-SS03-000H				
Battelle ID		J8363-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		1.64				
Matrix		SS				
Sample Size		2.00				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ	
PFHxA	307-24-4	3.24 J U		0.33	1.00	5.00	EBL
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	1.71 J U		0.22	0.50	5.00	EBL
PFOS	1763-23-1	39.59 U		0.27	1.00	5.00	EBL
Surrogate Recoveries (%)							
13C5-PFHxA		92					
13C4-PFHpA		93					
13C8-PFOA		104					
13C9-PFNA		92					
13C6-PFDA		111					
13C7-PFUnA		126					
13C2-PFDoA		109					
13C2-PFTeDA		109					
d3-MeFOSAA		99					
d5-EtFOSAA		115					
13C3-PFBS		118					
13C3-PFHxS		124					
13C8-PFOS		114					

BATTELLE
It can be done

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

Client ID	VC-PM324-SB03-0102
Battelle ID	J8364-FS
Sample Type	SA
Collection Date	09/24/2018
Extraction Date	10/02/2018
Analysis Date	10/09/2018
Analytical Instrument	Sciex 5500 LC/MS/MS
% Moisture	3.28
Matrix	SB
Sample Size	1.90
Size Unit-Basis	g
Units	ng/g_Dry

			MDL	LOD	LOQ	
PFHxA	307-24-4	1.23 U	0.35	1.05	5.26	EBL
PFHpA	**375-85-9**	**1.05 U**	**0.46**	**1.05**	**5.26**	
PFOA	335-67-1	0.67 J	0.53	1.05	5.26	
PFNA	**375-95-1**	**0.57 J**	**0.45**	**1.05**	**5.26**	
PFDA	335-76-2	1.05 U	0.28	1.05	5.26	
PFUnA	**2058-94-8**	**1.05 U**	**0.43**	**1.05**	**5.26**	
PFDoA	307-55-1	0.53 U	0.25	0.53	5.26	
PFTrDA	**72629-94-8**	**1.05 U**	**0.29**	**1.05**	**5.26**	
PFTeDA	376-06-7	2.11 U	0.66	2.11	5.26	
NMeFOSAA	**2355-31-9**	**2.63 U**	**1.18**	**2.63**	**5.26**	
NEtFOSAA	2991-50-6	2.11 U	0.60	2.11	5.26	
PFBS	**375-73-5**	**1.05 U**	**0.38**	**1.05**	**5.26**	
PFHxS	355-46-4	2.76 U	0.23	0.53	5.26	EBL
PFOS	**1763-23-1**	**216.54 U**	**1.42**	**5.26**	**26.32**	EBL

Surrogate Recoveries (%)

13C5-PFHxA	113
13C4-PFHpA	**105**
13C8-PFOA	118
13C9-PFNA	**99**
13C6-PFDA	114
13C7-PFUnA	**117**
13C2-PFDoA	104
13C2-PFTeDA	**106**
d3-MeFOSAA	107
d5-EtFOSAA	**128**
13C3-PFBS	117
13C3-PFHxS	**125**
13C8-PFOS	88

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

Client ID		VC-PM324-SB03-0506				
Battelle ID		J8365-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		21.35				
Matrix		SB				
Sample Size		1.58				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.27	U	0.42	1.27	6.33
PFHpA	**375-85-9**	**1.27**	**U**	**0.56**	**1.27**	**6.33**
PFOA	335-67-1	1.27	U	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**	**1.27**	**U**	**0.46**	**1.27**	**6.33**
PFHxS	355-46-4	1.16	J U	0.28	0.63	6.33
PFOS	**1763-23-1**	**4.26**	**J U**	**0.34**	**1.27**	**6.33**

EBL
EBL

Surrogate Recoveries (%)	
13C5-PFHxA	98
13C4-PFHpA	**103**
13C8-PFOA	115
13C9-PFNA	**104**
13C6-PFDA	108
13C7-PFUnA	**113**
13C2-PFDoA	106
13C2-PFTeDA	**103**
d3-MeFOSAA	110
d5-EtFOSAA	**137**
13C3-PFBS	111
13C3-PFHxS	**125**
13C8-PFOS	118

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

Client ID		VC-PM64B-SS01-000H			
Battelle ID		J8373-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		1.77			
Matrix		SS			
Sample Size		1.99			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.01 U	0.33	1.01	5.03
PFHpA	375-85-9	1.01 U	0.44	1.01	5.03
PFOA	335-67-1	1.01 U	0.50	1.01	5.03
PFNA	375-95-1	1.01 U	0.43	1.01	5.03
PFDA	335-76-2	1.01 U	0.27	1.01	5.03
PFUnA	2058-94-8	1.01 U	0.41	1.01	5.03
PFDoA	307-55-1	0.50 U	0.24	0.50	5.03
PFTrDA	72629-94-8	1.01 U	0.28	1.01	5.03
PFTeDA	376-06-7	2.01 U	0.63	2.01	5.03
NMeFOSAA	2355-31-9	2.51 U	1.13	2.51	5.03
NEtFOSAA	2991-50-6	2.01 U	0.57	2.01	5.03
PFBS	375-73-5	1.01 U	0.36	1.01	5.03
PFHxS	355-46-4	0.50 ~~0.27~~ u	0.22	0.50	5.03
PFOS	1763-23-1	2.34 u	0.27	1.01	5.03

EBL ↓

Surrogate Recoveries (%)	
13C5-PFHxA	101
13C4-PFHpA	102
13C8-PFOA	110
13C9-PFNA	100
13C6-PFDA	110
13C7-PFUnA	124
13C2-PFDoA	114
13C2-PFTeDA	107
d3-MeFOSAA	124
d5-EtFOSAA	137
13C3-PFBS	119
13C3-PFHxS	128
13C8-PFOS	121

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

Client ID		VC-PM64B-SB01-0102				
Battelle ID		J8374-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		4.27				
Matrix		SB				
Sample Size		1.97				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.02	U	0.34	1.02	5.08
PFHpA	375-85-9	1.02	U	0.45	1.02	5.08
PFOA	335-67-1	1.02	U	0.51	1.02	5.08
PFNA	375-95-1	1.02	U	0.44	1.02	5.08
PFDA	335-76-2	1.02	U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02	U	0.42	1.02	5.08
PFDoA	307-55-1	0.51	U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02	U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03	U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54	U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03	U	0.58	2.03	5.08
PFBS	375-73-5	1.02	U	0.37	1.02	5.08
PFHxS	355-46-4	0.51	U	0.22	0.51	5.08
PFOS	1763-23-1	11.48	u	0.27	1.02	5.08

EBL

Surrogate Recoveries (%)

13C5-PFHxA	106
13C4-PFHpA	113
13C8-PFOA	118
13C9-PFNA	107
13C6-PFDA	105
13C7-PFUnA	115
13C2-PFDoA	103
13C2-PFTeDA	102
d3-MeFOSAA	110
d5-EtFOSAA	129
13C3-PFBS	114
13C3-PFHxS	119
13C8-PFOS	123

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

Client ID	VC-PM64B-SB01-0506				
Battelle ID	J8375-FS				
Sample Type	SA				
Collection Date	09/24/2018				
Extraction Date	10/02/2018				
Analysis Date	10/09/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	20.93				
Matrix	SB				
Sample Size	1.59				
Size Unit-Basis	g				
Units	ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.26 U	0.42	1.26	6.29
PFHpA	375-85-9	1.26 U	0.55	1.26	6.29
PFOA	335-67-1	1.26 U	0.63	1.26	6.29
PFNA	375-95-1	1.26 U	0.54	1.26	6.29
PFDA	335-76-2	1.26 U	0.34	1.26	6.29
PFUnA	2058-94-8	1.26 U	0.52	1.26	6.29
PFDoA	307-55-1	0.63 U	0.30	0.63	6.29
PFTrDA	72629-94-8	1.26 U	0.35	1.26	6.29
PFTeDA	376-06-7	2.52 U	0.79	2.52	6.29
NMeFOSAA	2355-31-9	3.14 U	1.41	3.14	6.29
NEtFOSAA	2991-50-6	2.52 U	0.72	2.52	6.29
PFBS	375-73-5	1.26 U	0.45	1.26	6.29
PFHxS	355-46-4	0,63 ~~0.38~~ U	0.28	0.63	6.29 EBL
PFOS	1763-23-1	1.26 ~~0.76~~ U	0.34	1.26	6.29 EBL

Surrogate Recoveries (%)

13C5-PFHxA	96
13C4-PFHpA	98
13C8-PFOA	104
13C9-PFNA	99
13C6-PFDA	112
13C7-PFUnA	123
13C2-PFDoA	110
13C2-PFTeDA	109
d3-MeFOSAA	118
d5-EtFOSAA	125
13C3-PFBS	115
13C3-PFHxS	107
13C8-PFOS	113

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

Client ID		VC-PM64B-SS02-000H				
Battelle ID		J8376-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		8.50				
Matrix		SS				
Sample Size		1.84				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ	
PFHxA	307-24-4	2.19 J U		0.36	1.09	5.43	EBL
PFHpA	375-85-9	1.09 ~~1.00 J~~ U		0.48	1.09	5.43	EBL
PFOA	335-67-1	1.72 J		0.54	1.09	5.43	
PFNA	375-95-1	1.09 U		0.47	1.09	5.43	
PFDA	335-76-2	0.33 J		0.29	1.09	5.43	
PFUnA	2058-94-8	1.09 U		0.45	1.09	5.43	
PFDoA	307-55-1	0.54 U		0.26	0.54	5.43	
PFTrDA	72629-94-8	1.09 U		0.30	1.09	5.43	
PFTeDA	376-06-7	2.17 U		0.68	2.17	5.43	
NMeFOSAA	2355-31-9	2.72 U		1.22	2.72	5.43	
NEtFOSAA	2991-50-6	2.17 U		0.62	2.17	5.43	
PFBS	375-73-5	1.09 ~~0.65 J~~ U		0.39	1.09	5.43	EBL
PFHxS	355-46-4	~~3.07~~ J U		0.24	0.54	5.43	EBL
PFOS	1763-23-1	17.56 U		0.29	1.09	5.43	

Surrogate Recoveries (%)

13C5-PFHxA	110
13C4-PFHpA	110
13C8-PFOA	119
13C9-PFNA	111
13C6-PFDA	128
13C7-PFUnA	132
13C2-PFDoA	131
13C2-PFTeDA	126
d3-MeFOSAA	122
d5-EtFOSAA	141
13C3-PFBS	132
13C3-PFHxS	146
13C8-PFOS	132

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

Client ID		VC-PM64B-SB02-0102				
Battelle ID		J8377-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		15.57				
Matrix		SB				
Sample Size		1.63				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ	
PFHxA	307-24-4	1.54 J U		0.40	1.23	6.13	EBL
PFHpA	**375-85-9**	1.23 ~~0.84 J~~ U		**0.54**	**1.23**	**6.13**	EBL
PFOA	335-67-1	1.35 J		0.61	1.23	6.13	
PFNA	**375-95-1**	**0.65 J**		**0.53**	**1.23**	**6.13**	
PFDA	335-76-2	1.01 J		0.33	1.23	6.13	
PFUnA	**2058-94-8**	**1.23 U**		**0.50**	**1.23**	**6.13**	
PFDoA	307-55-1	0.43 J		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**	**1.23 U**		**0.44**	**1.23**	**6.13**	
PFHxS	355-46-4	2.53 J U		0.27	0.61	6.13	EBL
PFOS	**1763-23-1**	**17.97 U**		**0.33**	**1.23**	**6.13**	EBL

Surrogate Recoveries (%)

13C5-PFHxA	115
13C4-PFHpA	**120**
13C8-PFOA	121
13C9-PFNA	**102**
13C6-PFDA	120
13C7-PFUnA	**90**
13C2-PFDoA	106
13C2-PFTeDA	**127**
d3-MeFOSAA	134
d5-EtFOSAA	**93**
13C3-PFBS	147
13C3-PFHxS	**146**
13C8-PFOS	140

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

Client ID	VC-PM64B-SB02-0506				
Battelle ID	J8378-FS				
Sample Type	SA				
Collection Date	09/24/2018				
Extraction Date	10/02/2018				
Analysis Date	10/09/2018				
Analytical Instrument	Sciex 5500 LC/MS/MS				
% Moisture	19.76				
Matrix	SB				
Sample Size	1.59				
Size Unit-Basis	g				
Units	ng/g_Dry		MDL	LOD	LOQ	
PFHxA	307-24-4	1.26 ~~0.55 J~~ U	0.42	1.26	6.29	EBL
PFHpA	375-85-9	1.26 U	0.55	1.26	6.29	
PFOA	335-67-1	0.69 J	0.63	1.26	6.29	
PFNA	375-95-1	1.26 U	0.54	1.26	6.29	
PFDA	335-76-2	1.26 U	0.34	1.26	6.29	
PFUnA	2058-94-8	1.26 U	0.52	1.26	6.29	
PFDoA	307-55-1	0.63 U	0.30	0.63	6.29	
PFTrDA	72629-94-8	1.26 U	0.35	1.26	6.29	
PFTeDA	376-06-7	2.52 U	0.79	2.52	6.29	
NMeFOSAA	2355-31-9	3.14 U	1.41	3.14	6.29	
NEtFOSAA	2991-50-6	2.52 U	0.72	2.52	6.29	
PFBS	375-73-5	1.26 U	0.45	1.26	6.29	
PFHxS	355-46-4	9.22 U	0.28	0.63	6.29	EBL
PFOS	1763-23-1	47.97 U	0.34	1.26	6.29	EBL
Surrogate Recoveries (%)						
13C5-PFHxA		89				
13C4-PFHpA		100				
13C8-PFOA		115				
13C9-PFNA		112				
13C6-PFDA		117				
13C7-PFUnA		116				
13C2-PFDoA		112				
13C2-PFTeDA		110				
d3-MeFOSAA		117				
d5-EtFOSAA		133				
13C3-PFBS		124				
13C3-PFHxS		119				
13C8-PFOS		116				

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

Client ID		VC-PM64B-SS03-000H			
Battelle ID		J8379-FS			
Sample Type		SA			
Collection Date		09/24/2018			
Extraction Date		10/02/2018			
Analysis Date		10/09/2018			
Analytical Instrument		Sciex 5500 LC/MS/MS			
% Moisture		2.39			
Matrix		SS			
Sample Size		1.97			
Size Unit-Basis		g			
Units		ng/g_Dry	MDL	LOD	LOQ
PFHxA	307-24-4	1.02 U	0.34	1.02	5.08
PFHpA	375-85-9	1.02 U	0.45	1.02	5.08
PFOA	335-67-1	1.02 U	0.51	1.02	5.08
PFNA	375-95-1	1.02 U	0.44	1.02	5.08
PFDA	335-76-2	1.02 U	0.27	1.02	5.08
PFUnA	2058-94-8	1.02 U	0.42	1.02	5.08
PFDoA	307-55-1	0.51 U	0.24	0.51	5.08
PFTrDA	72629-94-8	1.02 U	0.28	1.02	5.08
PFTeDA	376-06-7	2.03 U	0.64	2.03	5.08
NMeFOSAA	2355-31-9	2.54 U	1.14	2.54	5.08
NEtFOSAA	2991-50-6	2.03 U	0.58	2.03	5.08
PFBS	375-73-5	1.02 U	0.37	1.02	5.08
PFHxS	355-46-4	0.65 JU	0.22	0.51	5.08 EBL
PFOS	1763-23-1	6.01 U	0.27	1.02	5.08 EBL

Surrogate Recoveries (%)

13C5-PFHxA	108
13C4-PFHpA	113
13C8-PFOA	113
13C9-PFNA	111
13C6-PFDA	121
13C7-PFUnA	128
13C2-PFDoA	116
13C2-PFTeDA	112
d3-MeFOSAA	114
d5-EtFOSAA	124
13C3-PFBS	123
13C3-PFHxS	127
13C8-PFOS	116

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

Client ID		VC-PM64B-SB03-0102				
Battelle ID		J8380-FS				
Sample Type		SA				
Collection Date		09/24/2018				
Extraction Date		10/02/2018				
Analysis Date		10/09/2018				
Analytical Instrument		Sciex 5500 LC/MS/MS				
% Moisture		4.05				
Matrix		SB				
Sample Size		1.95				
Size Unit-Basis		g				
Units		ng/g_Dry		MDL	LOD	LOQ
PFHxA	307-24-4	1.03 ~~0.52 J~~	U	0.34	1.03	5.13
PFHpA	375-85-9	1.03	U	0.45	1.03	5.13
PFOA	335-67-1	1.03	U	0.51	1.03	5.13
PFNA	375-95-1	1.03	U	0.44	1.03	5.13
PFDA	335-76-2	1.03	U	0.28	1.03	5.13
PFUnA	2058-94-8	1.03	U	0.42	1.03	5.13
PFDoA	307-55-1	0.51	U	0.25	0.51	5.13
PFTrDA	72629-94-8	1.03	U	0.29	1.03	5.13
PFTeDA	376-06-7	2.05	U	0.65	2.05	5.13
NMeFOSAA	2355-31-9	2.56	U	1.15	2.56	5.13
NEtFOSAA	2991-50-6	2.05	U	0.58	2.05	5.13
PFBS	375-73-5	1.03	U	0.37	1.03	5.13
PFHxS	355-46-4	1.48 J	U	0.23	0.51	5.13
PFOS	1763-23-1	8.70	U	0.28	1.03	5.13

EBL
EBL
EBL

Surrogate Recoveries (%)

13C5-PFHxA	114
13C4-PFHpA	108
13C8-PFOA	118
13C9-PFNA	116
13C6-PFDA	125
13C7-PFUnA	131
13C2-PFDoA	116
13C2-PFTeDA	114
d3-MeFOSAA	101
d5-EtFOSAA	123
13C3-PFBS	128
13C3-PFHxS	125
13C8-PFOS	137

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-PM323-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225366.8	1868767.2	Perfluoroalkyl Compounds	VC-PM323-SB01-0102	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM323-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225366.8	1868767.2	Perfluoroalkyl Compounds	VC-PM323-SB01-0506	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM323-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225366.8	1868767.2	Perfluoroalkyl Compounds	VC-PM323-SS01-000H	SU	Surface soil (less than 6 inches)	24-Sep-18
VC-PM323-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225338.2	1868433	Perfluoroalkyl Compounds	VC-PM323-SB03-0102	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM323-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225338.2	1868433	Perfluoroalkyl Compounds	VC-PM323-SB03-0506	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM323-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225338.2	1868433	Perfluoroalkyl Compounds	VC-PM323-SS03-000H	SU	Surface soil (less than 6 inches)	24-Sep-18
VC-PM324-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225160.8	1869121.6	Perfluoroalkyl Compounds	VC-PM324-SB01-0102	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM324-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225160.8	1869121.6	Perfluoroalkyl Compounds	VC-PM324-SB01-0506	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM324-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225160.8	1869121.6	Perfluoroalkyl Compounds	VC-PM324-SS01-000H	SU	Surface soil (less than 6 inches)	24-Sep-18
VC-PM324-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225618.8	1868978.2	Perfluoroalkyl Compounds	VC-PM324-SB03-0102	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM324-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225618.8	1868978.2	Perfluoroalkyl Compounds	VC-PM324-SB03-0506	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM324-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6225618.8	1868978.2	Perfluoroalkyl Compounds	VC-PM324-SS03-000H	SU	Surface soil (less than 6 inches)	24-Sep-18
VC-PM64B-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6228770.4	1864154.2	Perfluoroalkyl Compounds	VC-PM64B-SB01-0102	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM64B-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6228770.4	1864154.2	Perfluoroalkyl Compounds	VC-PM64B-SB01-0506	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM64B-SO01	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6228770.4	1864154.2	Perfluoroalkyl Compounds	VC-PM64B-SS01-000H	SU	Surface soil (less than 6 inches)	24-Sep-18
VC-PM64B-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6228883.9	1864101.9	Perfluoroalkyl Compounds	VC-PM64B-SB02-0102	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM64B-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6228883.9	1864101.9	Perfluoroalkyl Compounds	VC-PM64B-SB02-0506	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM64B-SO02	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6228883.9	1864101.9	Perfluoroalkyl Compounds	VC-PM64B-SS02-000H	SU	Surface soil (less than 6 inches)	24-Sep-18
VC-PM64B-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6228824.4	1864050.3	Perfluoroalkyl Compounds	VC-PM64B-SB03-0102	SBS	Sub-surface soil (> 6)	24-Sep-18
VC-PM64B-SO03	BASEWIDE PFAS	POINT_MUGU_NAS	DP	Direct Push/Geoprobe	18-0584	6228824.4	1864050.3	Perfluoroalkyl Compounds	VC-PM64B-SS03-000H	SU	Surface soil (less than 6 inches)	24-Sep-18