



**Off-base Drinking Water Sample Results,  
Level 2 Laboratory Report, Level 4 Laboratory Report,  
Electronic Data Deliverable, Data Validation Report,  
and the Sample Location Figure, SDG 1803499**

*Marine Corps Outlying Landing Field Atlantic  
MCAS Cherry Point NC*

February 2019

November 11, 2018

**Vista Work Order No. 1803499**

Ms. Tiffany Hill  
CH2M Hill  
1100 NE Circle Blvd. Suite 300  
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 03, 2018 under your Project Name 'CTO-08, MCOLF Atlantic PFAS DW Investigation'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com).

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.*

**Vista Work Order No. 1803499**

**Case Narrative**

**Sample Condition on Receipt:**

Two drinking water samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

**Analytical Notes:**

**EPA Method 537, Rev. 1.1**

The samples were extracted and analyzed for a selected list of 14 PFAS using EPA Method 537, Rev. 1.1.

**Holding Times**

The samples were extracted and analyzed within the method hold times.

**Quality Control**

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Laboratory Fortified Blank (LFB) and a Laboratory Reagent Blank (LRB) were extracted and analyzed with the preparation batch. No analytes were detected in the Laboratory Reagent Blank. The LFB recoveries were within the method acceptance criteria.

As requested, an LFSM/LFSMD was performed on sample "CH-AT-1RW202-1118". The LFSM/LFSMD recoveries and RPDs were within the method acceptance criteria.

The surrogate recoveries for all QC and field samples were within the acceptance criteria.

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# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
1803499-01	CH-AT-1RW202-1118	MS/MSD02-Nov-18 12:28	03-Nov-18 09:55	Polypropylene, 250mL Polypropylene, 250mL Polypropylene, 250mL Polypropylene, 250mL Polypropylene, 250mL Polypropylene, 250mL
1803499-02	CH-AT-1FB202-1118	02-Nov-18 12:29	03-Nov-18 09:55	Polypropylene, 250mL Polypropylene, 250mL

## **ANALYTICAL RESULTS**

<b>Sample ID: LRB</b>	<b>EPA Method 537</b>
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<b>Client Data</b>	<b>Laboratory Data</b>
Name: CH2M Hill Project: CTO-08, MCOLF Atlantic PFAS DW Investigation	Matrix: Aqueous Lab Sample: B8K0017-BLK1 Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	3.04	5.00	10.0		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:16	1
PFOA	335-67-1	ND	3.04	5.00	10.0		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:16	1
PFOS	1763-23-1	ND	3.04	5.00	10.0		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:16	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	102	70 - 130			B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:16	1	
13C2-PFDA	SURR	91.8	70 - 130			B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:16	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

**Sample ID: LFB**

**EPA Method 537**

Client Data					Laboratory Data				
Name:	CH2M Hill	Matrix:	Aqueous		Lab Sample:	B8K0017-BS1	Column:	BEH C18	
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigation								

Analyte	CAS Number	Amt Found (ng/L)	Spike Amt	% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	30.8	35.4	87.0	70 - 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1
PFOA	335-67-1	34.6	40.0	86.4	70 - 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1
PFOS	1763-23-1	28.9	37.0	78.2	70 - 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1
Labeled Standards		Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA		SURR		102	70- 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1
13C2-PFDA		SURR		86.3	70- 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1



**Sample ID: CH-AT-1RW202-1118** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1803499-01	Column:	BEH C18
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigation	Date Collected:	02-Nov-18 12:28	Date Received:	03-Nov-18 09:55		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
PFOA	335-67-1	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
PFOS	1763-23-1	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.7	70 - 130			B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1	
13C2-PFDA	SURR	87.5	70 - 130			B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1	

DL - Detection Limit

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LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-1RW202-1118**

**EPA Method 537**

Name:	CH2M Hill	Lab Sample:	B8K0017-MS1/B8K0017-MSD1	Source Lab Sample:	1803499-01
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigator	QC Batch:	B8K0017	Date Extracted:	05-Nov-18
Matrix:	Aqueous	Samp Size:	0.251/0.251 L	Column:	BEH C18

Analyte	CAS Number	Sample (ng/L)	LFSM (ng/L)	LFSM Spike Amt	LFSM % Rec	LFSM Quals	LFSMD (ng/L)	LFSMD Spike Amt	LFSMD % Rec	RPD	LFSMD Quals	%Rec Limits	RPD Limits	LFSM Analyzed	LFSM Dil	LFSMD Analyzed	LFS MD
PFBS	375-73-5	ND	32.3	35.3	91.4		28.6	35.3	80.7	12.4		70-130	30	06-Nov-18 13:29	1	06-Nov-18 13:42	1
PFOA	335-67-1	ND	34.3	39.8	85.3		34.2	39.9	84.8	0.588		70-130	30	06-Nov-18 13:29	1	06-Nov-18 13:42	1
PFOS	1763-23-1	ND	30.4	36.9	82.5		28.9	36.9	78.3	5.22		70-130	30	06-Nov-18 13:29	1	06-Nov-18 13:42	1
Labeled Standards		Type			LFSM % Rec	LFSM Quals			LFSMD % Rec		LFSMD Quals	Limits		LFSM Analyzed	LFSM Dil	LFSMD Analyzed	LFS MD
13C2-PFHxA		SURR			99.9				97.9			70-130		06-Nov-18 13:29	1	06-Nov-18 13:42	1
13C2-PFDA		SURR			94.9				92.8			70-130		06-Nov-18 13:29	1	06-Nov-18 13:42	1

**Sample ID: CH-AT-1FB202-1118** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1803499-02	Column:	BEH C18
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigation	Date Collected:	02-Nov-18 12:29	Date Received:	03-Nov-18 09:55		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
PFOA	335-67-1	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
PFOS	1763-23-1	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.4	70 - 130			B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1	
13C2-PFDA	SURR	86.5	70 - 130			B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

## **DATA QUALIFIERS & ABBREVIATIONS**

<b>B</b>	<b>This compound was also detected in the method blank</b>
<b>Conc.</b>	<b>Concentration</b>
<b>D</b>	<b>Dilution</b>
<b>DL</b>	<b>Detection limit</b>
<b>E</b>	<b>The associated compound concentration exceeded the calibration range of the instrument</b>
<b>H</b>	<b>Recovery and/or RPD was outside laboratory acceptance limits</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Reporting Limit/LOQ</b>
<b>LOD</b>	<b>Limits of Detection</b>
<b>LOQ</b>	<b>Limits of Quantitation</b>
<b>M</b>	<b>Estimated Maximum Possible Concentration (CA Region 2 projects only)</b>
<b>NA</b>	<b>Not applicable</b>
<b>ND</b>	<b>Not Detected</b>
<b>Q</b>	<b>Ion ratio outside of 70-130% of Standard Ratio. (DOD PFAS projects only)</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>
<b>U</b>	<b>Not Detected (specific projects only)</b>
<b>*</b>	<b>See Cover Letter</b>

**Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.**

## CERTIFICATIONS

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	18-008-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Minnesota Department of Health	1322288
New Hampshire Environmental Accreditation Program	207717
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-009
Pennsylvania Department of Environmental Protection	014
Texas Commission on Environmental Quality	T104704189-18-8
Virginia Department of General Services	9077
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

*Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.*

## NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



# CHAIN OF CUSTODY

**For Laboratory Use Only**  
 Work Order #: 1803499 Temp: 0.1 °C  
 Storage ID: WR-2 Storage Secured Yes  No

Project ID: CTO-08, MCOLF Atlantic PFAS DW Investigation PO#: 10006-7-106051 Sampler: K. SMITH / M. MANNS  
 (name)

TAT (check one): Standard  21 days  
 Rush (surcharge may apply)  14 days  7 days Specify: \_\_\_\_\_

Invoice to: Name Tiffany Hill Company CH2M Address 1100 NE Circle Blvd Suite #300 City Corvallis State Oregon Ph# 541-768-3109 Fax# \_\_\_\_\_

Relinquished by (printed name and signature) MARITA MANNS *Marita Manns* Date 11/2/18 Time 1400 Received by (printed name and signature) KIM ERIK *[Signature]* Date 11/3/18 Time 0955

SHIP TO: Vista Analytical Laboratory  
 1104 Windfield Way  
 El Dorado Hills, CA 95762  
 (916) 673-1520 \* Fax (916) 673-0106  
 ATTN: Martha Maier

Method of Shipment: FEDEX  
 Tracking No: \_\_\_\_\_

Sample ID	Date	Time	Location/Sample Description	Add Analysis(es) Requested								Comments			
				Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	337 List: 14	Full List of 26	Other: Please List Below		Mod EPA Method 537	EPA Method 537 (DW only)	
CH-AT-1RW202-1118	11/2/18	12:28		2	P	DW									TZ preservative
CH-AT-1FB202-1118	11/2/18	12:29		2	P	DW									TZ preservative
CH-AT-1RW202-1118-MS	11/2/18	12:28		2	P	DW									TZ preservative
CH-AT-1RW202-1118-SD	11/2/18	12:28		2	P	DW									TZ preservative

Special Instructions/Comments: 7 DAY TAT  
Analysis of Drinking Water samples for PFOA/PFOS/PFBS

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill  
 Company: CH2M HILL Inc.  
 Address: 1100 NE Circle Blvd Suite 300  
 City: Corvallis State: OR Zip: 97330  
 Phone: 541-768-3109 Fax: \_\_\_\_\_  
 Email: Tiffany.Hill@ch2m.com

Container Types: P= HDPE, PJ= HDPE Jar, O = Other  
 Bottle Preservation Type: T = Thiosulfate, TZ = Trizma  
 Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other:



# Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 1803499 TAT RUSH

Samples Arrival:	Date/Time <u>11/03/18 0955</u>	Initials: <u>KE</u>	Location: <u>WR2</u>
Logged In:	Date/Time <u>11/3/18 1245</u>	Initials: <u>UBSB</u>	Location: <u>WR-2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> GSO	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C:	<u>0.2</u> (uncorrected)	Probe used: Y / <input checked="" type="checkbox"/> N	Thermometer ID: <u>IR4</u>
Temp °C:	<u>0.1</u> (corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>SAT DELIVERY</u> Trk # <u>7736 2830 6489</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?			<input checked="" type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input checked="" type="checkbox"/>		
Preservation Documented:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	<input checked="" type="checkbox"/> Trizma	<input type="checkbox"/> None
	<input type="checkbox"/> Other		
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

November 11, 2018

**Vista Work Order No. 1803499**

Ms. Tiffany Hill  
CH2M Hill  
1100 NE Circle Blvd. Suite 300  
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on November 03, 2018 under your Project Name 'CTO-08, MCOLF Atlantic PFAS DW Investigation'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at [mmaier@vista-analytical.com](mailto:mmaier@vista-analytical.com).

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier  
Laboratory Director



*Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.*

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**Case Narrative**

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# Sample Inventory Report

<b>Vista Sample ID</b>	<b>Client Sample ID</b>	<b>Sampled</b>	<b>Received</b>	<b>Components/Containers</b>
1803499-01	CH-AT-1RW202-1118	MS/MSD02-Nov-18 12:28	03-Nov-18 09:55	Polypropylene, 250mL Polypropylene, 250mL Polypropylene, 250mL Polypropylene, 250mL Polypropylene, 250mL Polypropylene, 250mL
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## **ANALYTICAL RESULTS**

<b>Sample ID: LRB</b>	<b>EPA Method 537</b>
-----------------------	-----------------------

<b>Client Data</b>	<b>Laboratory Data</b>
Name: CH2M Hill Project: CTO-08, MCOLF Atlantic PFAS DW Investigation	Matrix: Aqueous Lab Sample: B8K0017-BLK1 Column: BEH C18

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
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PFOA	335-67-1	34.6	40.0	86.4	70 - 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1
PFOS	1763-23-1	28.9	37.0	78.2	70 - 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1
Labeled Standards		Type		% Rec	Limits	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
13C2-PFHxA		SURR		102	70- 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1
13C2-PFDA		SURR		86.3	70- 130		B8K0017	05-Nov-18	0.250 L	06-Nov-18 13:03	1



**Sample ID: CH-AT-1RW202-1118** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1803499-01	Column:	BEH C18
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigation	Date Collected:	02-Nov-18 12:28	Date Received:	03-Nov-18 09:55		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
PFOA	335-67-1	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
PFOS	1763-23-1	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.7	70 - 130			B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1	
13C2-PFDA	SURR	87.5	70 - 130			B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1	

DL - Detection Limit

LOD - Limit of Detection

LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

**Sample ID: CH-AT-1RW202-1118**

**EPA Method 537**

Name:	CH2M Hill	Lab Sample:	B8K0017-MS1/B8K0017-MSD1	Source Lab Sample:	1803499-01
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigator	QC Batch:	B8K0017	Date Extracted:	05-Nov-18
Matrix:	Aqueous	Samp Size:	0.251/0.251 L	Column:	BEH C18

Analyte	CAS Number	Sample (ng/L)	LFSM (ng/L)	LFSM Spike Amt	LFSM % Rec	LFSM Quals	LFSMD (ng/L)	LFSMD Spike Amt	LFSMD % Rec	RPD	LFSMD Quals	%Rec Limits	RPD Limits	LFSM Analyzed	LFSM Dil	LFSMD Analyzed	LFS MD
PFBS	375-73-5	ND	32.3	35.3	91.4		28.6	35.3	80.7	12.4		70-130	30	06-Nov-18 13:29	1	06-Nov-18 13:42	1
PFOA	335-67-1	ND	34.3	39.8	85.3		34.2	39.9	84.8	0.588		70-130	30	06-Nov-18 13:29	1	06-Nov-18 13:42	1
PFOS	1763-23-1	ND	30.4	36.9	82.5		28.9	36.9	78.3	5.22		70-130	30	06-Nov-18 13:29	1	06-Nov-18 13:42	1

Labeled Standards	Type	LFSM % Rec	LFSM Quals	LFSMD % Rec	LFSMD Quals	Limits	LFSM Analyzed	LFSM Dil	LFSMD Analyzed	LFS MD
13C2-PFHxA	SURR	99.9		97.9		70-130	06-Nov-18 13:29	1	06-Nov-18 13:42	1
13C2-PFDA	SURR	94.9		92.8		70-130	06-Nov-18 13:29	1	06-Nov-18 13:42	1

**Sample ID: CH-AT-1FB202-1118** **EPA Method 537**

Client Data				Laboratory Data			
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1803499-02	Column:	BEH C18
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigation	Date Collected:	02-Nov-18 12:29	Date Received:	03-Nov-18 09:55		

Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
PFOA	335-67-1	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
PFOS	1763-23-1	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.4	70 - 130			B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1	
13C2-PFDA	SURR	86.5	70 - 130			B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

## **DATA QUALIFIERS & ABBREVIATIONS**

<b>B</b>	<b>This compound was also detected in the method blank</b>
<b>Conc.</b>	<b>Concentration</b>
<b>D</b>	<b>Dilution</b>
<b>DL</b>	<b>Detection limit</b>
<b>E</b>	<b>The associated compound concentration exceeded the calibration range of the instrument</b>
<b>H</b>	<b>Recovery and/or RPD was outside laboratory acceptance limits</b>
<b>I</b>	<b>Chemical Interference</b>
<b>J</b>	<b>The amount detected is below the Reporting Limit/LOQ</b>
<b>LOD</b>	<b>Limits of Detection</b>
<b>LOQ</b>	<b>Limits of Quantitation</b>
<b>M</b>	<b>Estimated Maximum Possible Concentration (CA Region 2 projects only)</b>
<b>NA</b>	<b>Not applicable</b>
<b>ND</b>	<b>Not Detected</b>
<b>Q</b>	<b>Ion ratio outside of 70-130% of Standard Ratio. (DOD PFAS projects only)</b>
<b>TEQ</b>	<b>Toxic Equivalency</b>
<b>U</b>	<b>Not Detected (specific projects only)</b>
<b>*</b>	<b>See Cover Letter</b>

**Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.**

## CERTIFICATIONS

Accrediting Authority	Certificate Number
Alaska Department of Environmental Conservation	17-013
Arkansas Department of Environmental Quality	18-008-0
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777-18
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2018017
Minnesota Department of Health	1322288
New Hampshire Environmental Accreditation Program	207717
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-009
Pennsylvania Department of Environmental Protection	014
Texas Commission on Environmental Quality	T104704189-18-8
Virginia Department of General Services	9077
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

*Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request.*

## NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



# CHAIN OF CUSTODY

**For Laboratory Use Only**  
 Work Order #: 1803499 Temp: 0.1 °C  
 Storage ID: WR-2 Storage Secured Yes  No

Project ID: CTO-08, MCOLF Atlantic PFAS DW Investigation PO#: 10006-7-106051 Sampler: K. SMITH / M. MANNS  
 (name)

TAT (check one): Standard  21 days  
 Rush (surcharge may apply)  14 days  7 days Specify: \_\_\_\_\_

Invoice to: Name Tiffany Hill Company CH2M Address 1100 NE Circle Blvd Suite #300 City Corvallis State Oregon Ph# 541-768-3109 Fax# \_\_\_\_\_

Relinquished by (printed name and signature) MARITA MANNS *Marita Manns* Date 11/2/18 Time 1400 Received by (printed name and signature) KIM ERIK *[Signature]* Date 11/3/18 Time 0955

SHIP TO: Vista Analytical Laboratory  
 1104 Windfield Way  
 El Dorado Hills, CA 95762  
 (916) 673-1520 \* Fax (916) 673-0106  
 Method of Shipment: FEDEX  
 ATTN: Martha Maier  
 Tracking No: \_\_\_\_\_

Sample ID	Date	Time	Location/Sample Description	Add Analysis(es) Requested								Comments			
				Quantity	Type	Matrix	PFOA/PFOS	UCMR3 PFAS List 6	337 List: 14	Full List of 26	Other: Please List Below		Mod EPA Method 537	EPA Method 537 (DW only)	
CH-AT-1RW202-1118	11/2/18	12:28		2	P	DW							X		TZ preservative
CH-AT-1FB202-1118	11/2/18	12:29		2	P	DW							X		TZ preservative
CH-AT-1RW202-1118-MS	11/2/18	12:28		2	P	DW							X		TZ preservative
CH-AT-1RW202-1118-SD	11/2/18	12:28		2	P	DW							X		TZ preservative

Special Instructions/Comments: 7 DAY TAT  
Analysis of Drinking Water samples for PFOA/PFOS/PFBS

SEND DOCUMENTATION AND RESULTS TO:  
 Name: Tiffany Hill  
 Company: CH2M HILL Inc.  
 Address: 1100 NE Circle Blvd Suite 300  
 City: Corvallis State: OR Zip: 97330  
 Phone: 541-768-3109 Fax: \_\_\_\_\_  
 Email: Tiffany.Hill@ch2m.com

Container Types: P= HDPE, PJ= HDPE Jar  
 O = Other \_\_\_\_\_  
 Bottle Preservation Type: T = Thiosulfate,  
 TZ = Trizma: \_\_\_\_\_  
 Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment,  
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: \_\_\_\_\_



# Sample Log-In Checklist

Page # 1 of 1

Vista Work Order #: 1803499 TAT RUSH

Samples Arrival:	Date/Time <u>11/03/18 0955</u>	Initials: <u>KE</u>	Location: <u>WR2</u>
Logged In:	Date/Time <u>11/3/18 1245</u>	Initials: <u>UBSB</u>	Location: <u>WR-2</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> GSO	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered
	<input type="checkbox"/> Other		
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C:	<u>0.2</u> (uncorrected)	Probe used: Y / <input checked="" type="checkbox"/> N	Thermometer ID: <u>IR4</u>
Temp °C:	<u>0.1</u> (corrected)		

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill <u>SAT DELIVERY</u> Trk # <u>7736 2830 6489</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?			<input checked="" type="checkbox"/>
If Chlorinated or Drinking Water Samples, Acceptable Preservation?	<input checked="" type="checkbox"/>		
Preservation Documented:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
	<input type="checkbox"/> Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	<input checked="" type="checkbox"/> Trizma	<input type="checkbox"/> None
	<input type="checkbox"/> Other		
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

## **EXTRACTION INFORMATION**



Process Sheet  
 Workorder: **1803499**

Prep Expiration: 2018-Nov-16  
 Client: CH2M Hill

Workorder Due: **12-Nov-18 00:00**  
 TAT: 9

Method: **537 PFAS DW DoD Unmodified**  
 Matrix: **Aqueous**

Prep Batch: PSK0017

Version: PFOA, PFOS, PFBS  
 DoD: **DoD QSM 5.1**

Prep Data Entered: 11/6/18   
Date and Initials

Initial Sequence: SSK0013

LabSampID	A/B	Prep Rec	Spike Rec	ClientSampleID	Comments	Location	Container
1803499-01	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-1RW202-1118	<del>MS/MSD</del>	WR-2 A-3	Polypropylene, 250mL
1803499-02	↓	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CH-AT-1FB202-1118		WR-2 A-3	Polypropylene, 250mL

Pre-Prep Check Out: MAC 11/5/18

Prep Check Out: NA

Prep Reconciled Initials/Date: MAC 11/5/18

Pre-Prep Check In: NA

Prep Check In: NA

Spike Reconciled Initials/Date: mg 11/6/18

VialBoxID: 01' fashion

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DW DoD Unmodified

B8K0017

Chemist: my

Prep Date: 11/5/18

Prep Time: 8:45

Prepared using: LCMS - SPE Extraction-LCMS

		BalanceID: <u>ADMS-9</u>							
Cen	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	SS/NS CHEM/WIT DATE	SPE	IS CHEM/WIT DATE		
<input type="checkbox"/>	B8K0017-BLK1 <u>1</u>	NA	NA	(0.250)	my aE 11/5/18	my 11/5/18	my FR 11/5/18		
<input type="checkbox"/>	B8K0017-BS1 <u>1</u>	↓	↓	(0.250)	↓	↓	↓		
<input type="checkbox"/>	B8K0017-MS1 1803499-01	288.11	37.12	0.25099 ✓	↓	↓	↓		
<input type="checkbox"/>	B8K0017-MSD1 1803499-01	287.84	37.18	0.25066 ✓	↓	↓	↓		
<input type="checkbox"/>	1803499-01	291.46	37.31	0.25415 ✓	↓	↓	↓		
<input type="checkbox"/>	1803499-02	287.32	37.21	0.25611 ✓	↓	↓	↓		

SS/IS: <u>18H1309, 20ml (C2)</u> NS: <u>18H1311, 10ml (V2)</u> IS/RS: <u>18H1310, 20ml (C2)</u>	SPE Chem: <u>Strata-X 33um 500ug/bml</u> Lot#: <u>518-004039</u> Ele SOLV: <u>MeOH</u> Lot#: <u>JB069209</u> Final Volume(s) <u>1 ml</u>	Notes: <u>(A) 1.25 Trisoma method MAC 11/5/18</u>
---	--	---

Comments: Assume 1 g = 1 mL  
Cen = Centrifuged

Batch: B8K0017

Matrix: Aqueous

LabNumber	WetWeight (Initial)	% Solids (Extraction Solids)	DryWeight	Final	Extracted	Ext By	Spike	SpikeAmount	ClientMatrix	Analysis
1803499-01	0.25415 ✓			1000	05-Nov-18 08:45	NY			Drinking Water	537 PFAS DW DoD Unmoc
1803499-02	0.25611 ✓			1000	05-Nov-18 08:45	NY			Drinking Water	537 PFAS DW DoD Unmoc
B8K0017-BLK1	0.25 ✓			1000	05-Nov-18 08:45	NY				QC
B8K0017-BS1	0.25 ✓			1000	05-Nov-18 08:45	NY	18H1311 ✓	10 ✓		QC
B8K0017-MS1	0.25099 ✓			1000	05-Nov-18 08:45	NY	18H1311 ✓	10 ✓		QC
B8K0017-MSD1	0.25066 ✓			1000	05-Nov-18 08:45	NY	18H1311 ✓	10 ✓		QC

*AD* 11/6/18

**SAMPLE DATA –EPA METHOD 537**

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-19.qld

Last Altered: Wednesday, November 07, 2018 10:22:57 Pacific Standard Time

Printed: Wednesday, November 07, 2018 10:23:44 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_19, Date: 06-Nov-2018, Time: 13:16:52, ID: B8K0017-BLK1 LRB 0.25, Description: LRB

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2		1.52e4	0.250		2.95				
2	2 PFHxA	312.8 > 269.0	6.82e1	9.19e3	0.250		3.30	3.30	0.0743	0.346	
3	3 PFHpA	362.8 > 319.0	2.65e1	9.19e3	0.250		3.81	3.81	0.0288	0.114	
4	4 PFHxS	398.7 > 80.2		1.52e4	0.250		3.94				
5	5 PFOA	412.7 > 368.9	4.90e1	9.19e3	0.250		4.22	4.22	0.0533	0.193	
6	6 PFNA	462.8 > 419.0	1.88e1	9.19e3	0.250		4.57	4.58	0.0205	0.0924	
7	7 PFOS	498.7 > 80.2		1.52e4	0.250		4.65				
8	8 PFDA	512.8 > 468.9	7.83e1	9.19e3	0.250		4.89	4.88	0.0852	0.256	
9	9 N-MeFOSAA	569.8 > 419.0		2.16e4	0.250		5.00				
10	10 N-EtFOSAA	583.8 > 419.0		2.16e4	0.250		5.09				
11	11 PFUnA	562.7 > 518.9	1.15e1	9.19e3	0.250		5.14	5.12	0.0125	0.0381	
12	12 PFDoA	612.8 > 569.0	8.79e0	9.19e3	0.250		5.34	5.37	0.00957	0.0288	
13	13 PFTTrDA	662.8 > 619.0	1.43e1	9.19e3	0.250		5.56	5.57	0.0155	0.0455	
14	14 PFTeDA	712.8 > 669.0	1.28e1	9.19e3	0.250		5.75	5.74	0.0140	0.0430	
15	15 13C2-PFHxA	314.9 > 270.0	8.39e3	9.19e3	0.250	0.897	3.29	3.30	9.14	40.8	101.9
16	16 13C2-PFDA	514.8 > 470.0	9.79e3	9.19e3	0.250	1.160	4.86	4.87	10.7	36.7	91.8
17	17 d5-N-EtFOSAA	588.8 > 419.0	1.83e4	2.16e4	0.250	0.872	5.13	5.11	34.0	156	97.4
18	18 13C2-PFOA	414.8 > 370.0	9.19e3	9.19e3	0.250	1.000	4.22	4.22	10.0	40.0	100.0
19	19 13C4-PFOS	502.8 > 80.2	1.52e4	1.52e4	0.250	1.000	4.63	4.65	28.7	115	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.0	2.16e4	2.16e4	0.250	1.000	5.05	5.00	40.0	160	100.0

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-19.qld

Last Altered: Wednesday, November 07, 2018 10:22:57 Pacific Standard Time

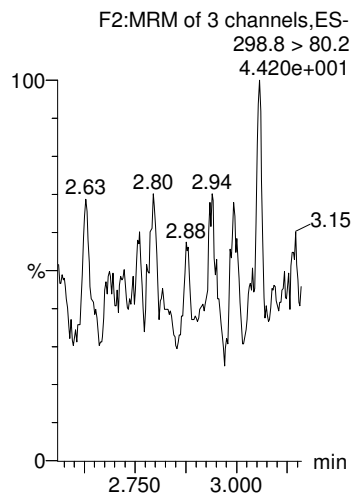
Printed: Wednesday, November 07, 2018 10:23:44 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

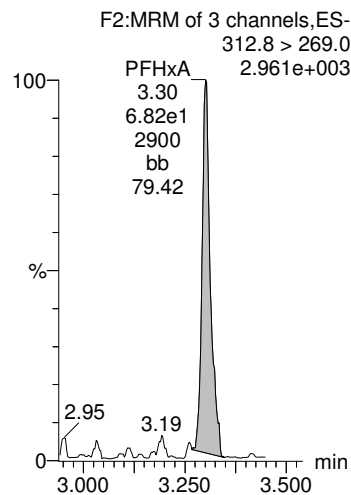
Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_19, Date: 06-Nov-2018, Time: 13:16:52, ID: B8K0017-BLK1 LRB 0.25, Description: LRB

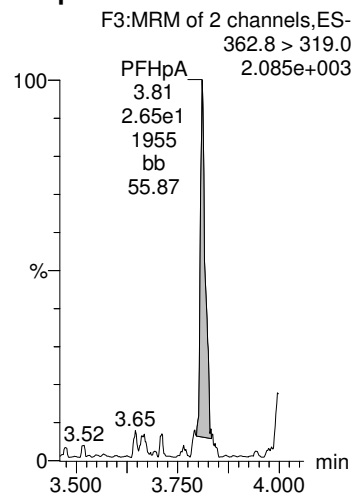
**PFBS**



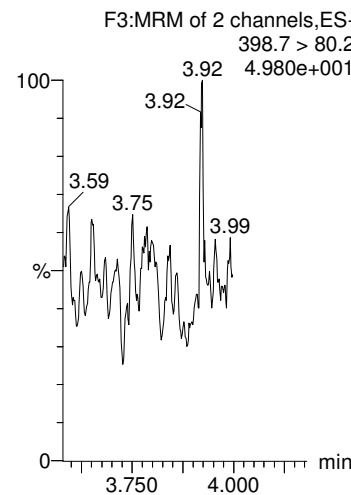
**PFHxA**



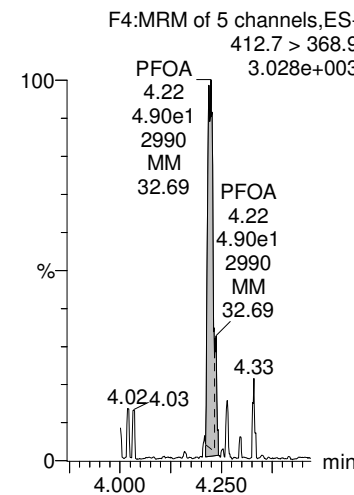
**PFHpA**



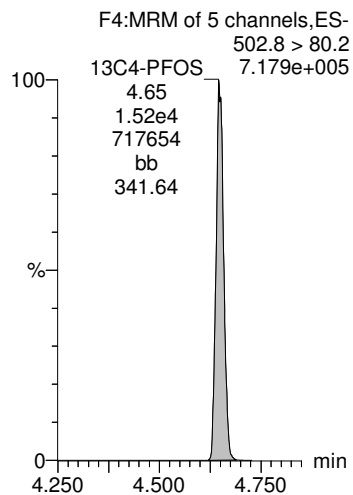
**PFHxS**



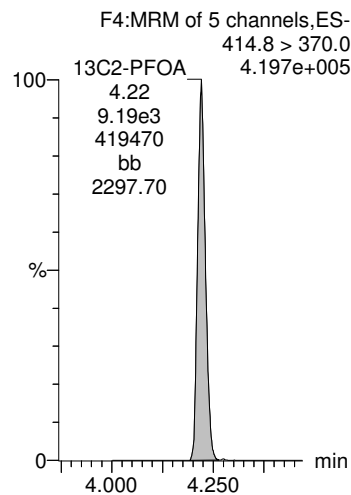
**PFOA**



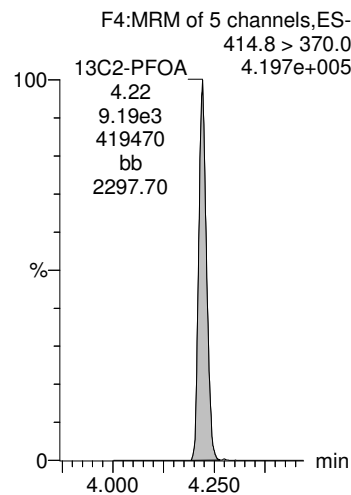
**13C4-PFOS**



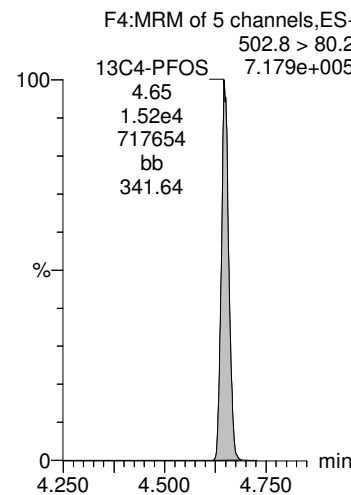
**13C2-PFOA**



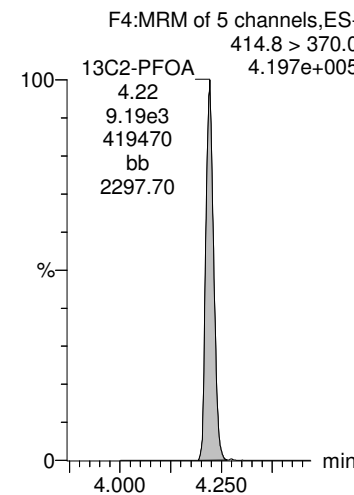
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



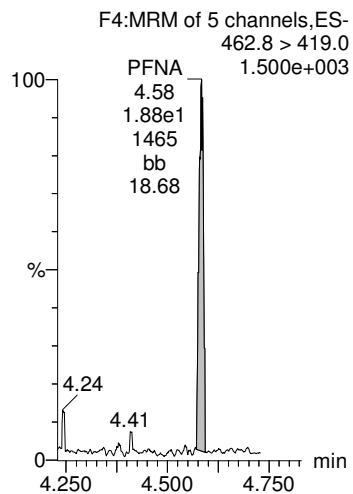


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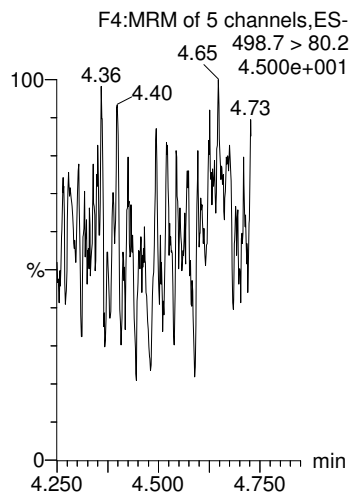
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Printed: Wednesday, November 07, 2018 10:23:44 Pacific Standard Time

Name: 181106G1\_19, Date: 06-Nov-2018, Time: 13:16:52, ID: B8K0017-BLK1 LRB 0.25, Description: LRB

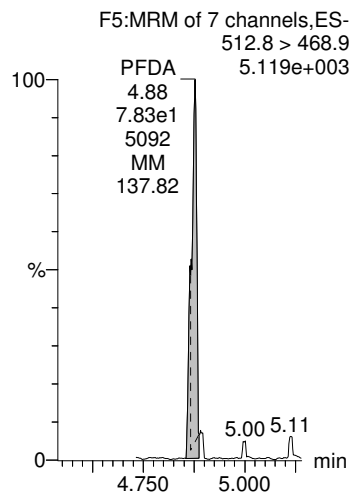
**PFNA**



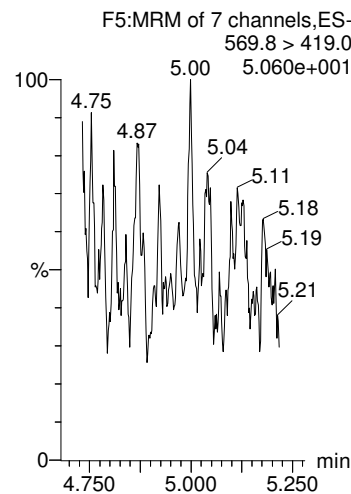
**PFOS**



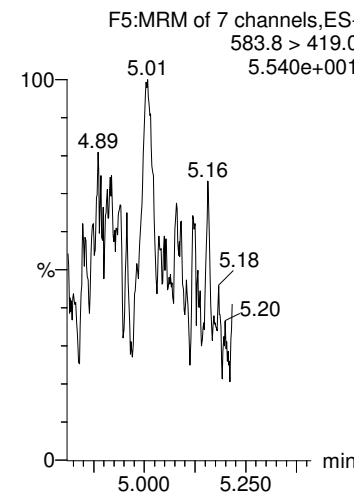
**PFDA**



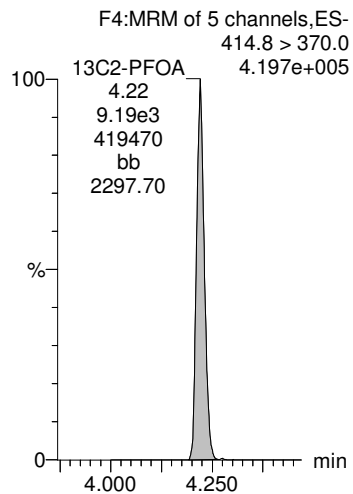
**N-MeFOSAA**



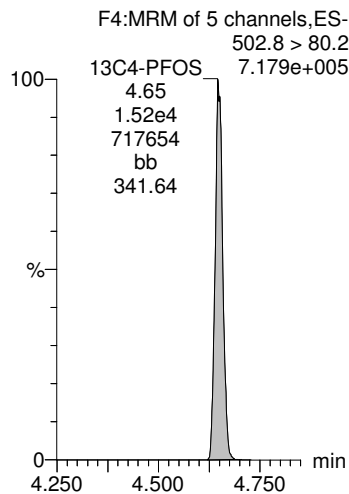
**N-EtFOSAA**



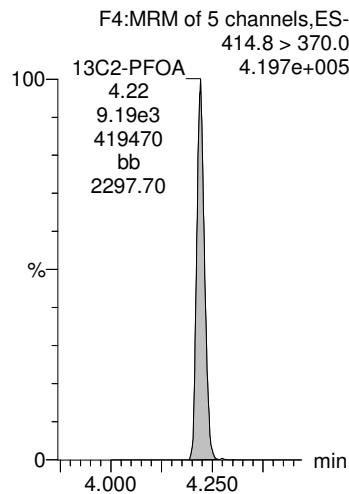
**13C2-PFOA**



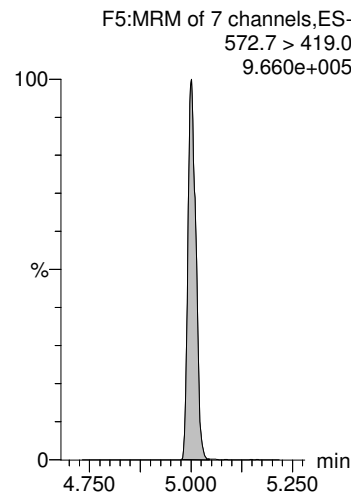
**13C4-PFOS**



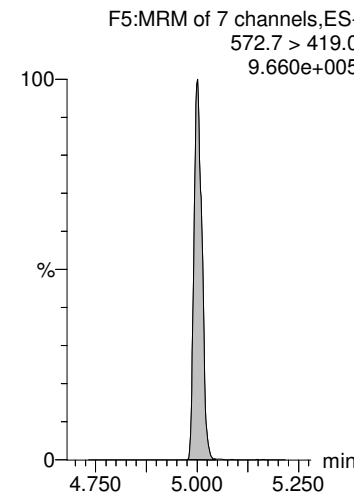
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

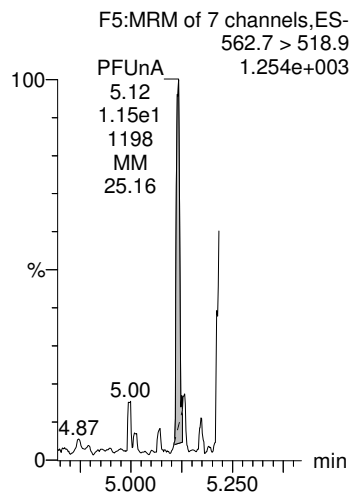


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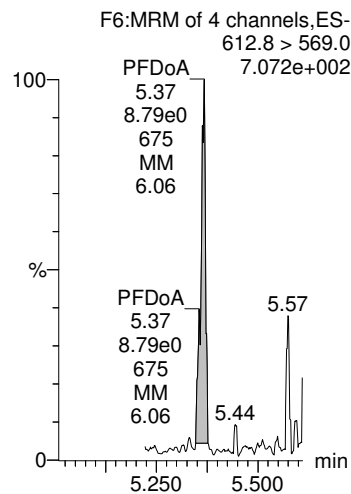
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Printed: Wednesday, November 07, 2018 10:23:44 Pacific Standard Time

Name: 181106G1\_19, Date: 06-Nov-2018, Time: 13:16:52, ID: B8K0017-BLK1 LRB 0.25, Description: LRB

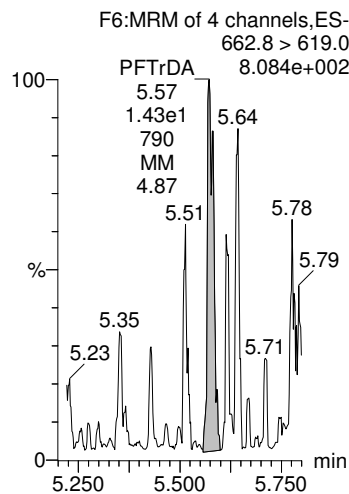
**PFUnA**



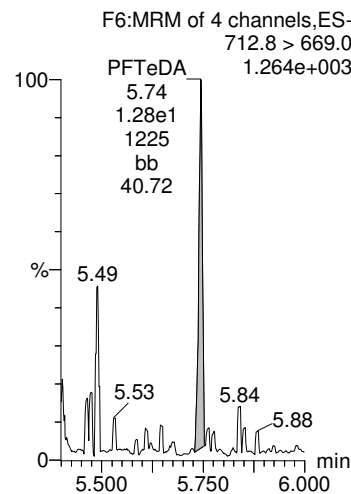
**PFDaA**



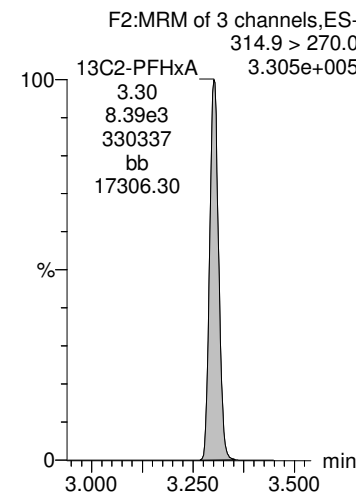
**PFTrDA**



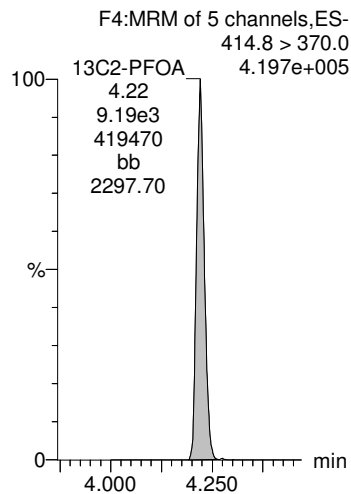
**PFTeDA**



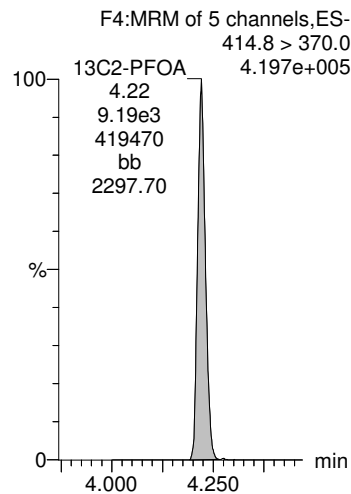
**13C2-PFHxA**



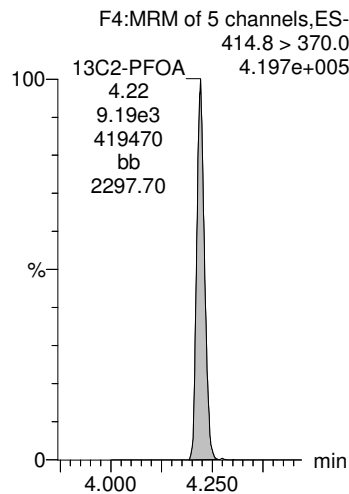
**13C2-PFOA**



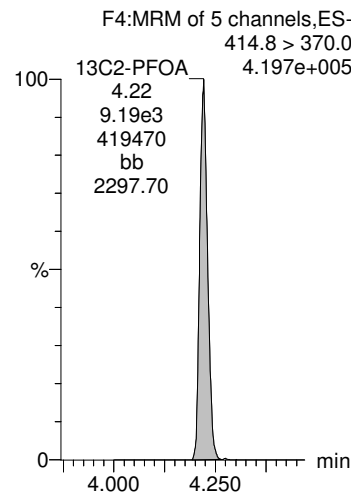
**13C2-PFOA**



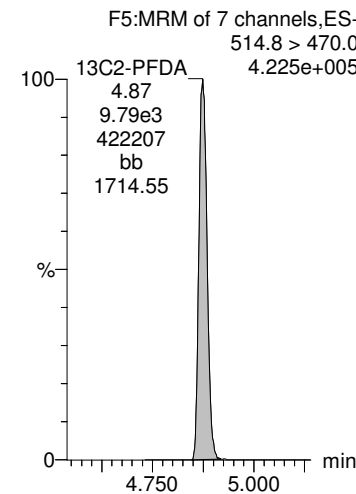
**13C2-PFOA**



**13C2-PFOA**



**13C2-PFDA**

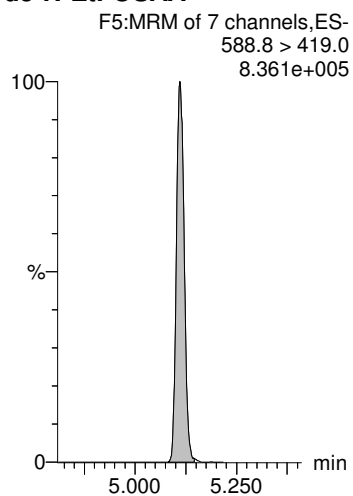


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Last Altered: Wednesday, November 07, 2018 10:22:57 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 10:23:44 Pacific Standard Time

Name: 181106G1\_19, Date: 06-Nov-2018, Time: 13:16:52, ID: B8K0017-BLK1 LRB 0.25, Description: LRB

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-18.qld

Last Altered: Wednesday, November 07, 2018 10:14:27 Pacific Standard Time

Printed: Wednesday, November 07, 2018 10:16:25 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_18, Date: 06-Nov-2018, Time: 13:03:55, ID: B8K0017-BS1 LFB 0.25, Description: LFB

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	3.19e3	1.36e4	0.250		2.95	2.93	6.72	30.8	87.1
2	2 PFHxA	312.8 > 269.0	6.64e3	8.97e3	0.250		3.30	3.30	7.41	34.5	86.2
3	3 PFHpA	362.8 > 319.0	7.91e3	8.97e3	0.250		3.81	3.81	8.82	34.8	87.0
4	4 PFHxS	398.7 > 80.2	3.28e3	1.36e4	0.250		3.94	3.93	6.92	31.7	86.8
5	5 PFOA	412.7 > 368.9	8.54e3	8.97e3	0.250		4.22	4.22	9.52	34.6	86.4
6	6 PFNA	462.8 > 419.0	6.57e3	8.97e3	0.250		4.57	4.58	7.33	33.1	82.7
7	7 PFOS	498.7 > 80.2	1.28e3	1.36e4	0.250		4.65	4.65	2.70	28.9	78.3
8	8 PFDA	512.8 > 468.9	1.03e4	8.97e3	0.250		4.89	4.88	11.5	34.4	86.0
9	9 N-MeFOSAA	569.8 > 419.0	3.43e3	2.08e4	0.250		5.00	5.00	6.58	34.2	85.5
10	10 N-EtFOSAA	583.8 > 419.0	2.69e3	2.08e4	0.250		5.09	5.12	5.17	32.3	80.7
11	11 PFUnA	562.7 > 518.9	8.93e3	8.97e3	0.250		5.14	5.13	9.95	30.2	75.6
12	12 PFDoA	612.8 > 569.0	8.80e3	8.97e3	0.250		5.34	5.36	9.81	29.5	73.7
13	13 PFTrDA	662.8 > 619.0	9.39e3	8.97e3	0.250		5.55	5.57	10.5	30.7	76.7
14	14 PFTeDA	712.8 > 669.0	9.22e3	8.97e3	0.250		5.75	5.75	10.3	31.6	79.0
15	15 13C2-PFHxA	314.9 > 270.0	8.16e3	8.97e3	0.250	0.897	3.29	3.30	9.10	40.6	101.5
16	16 13C2-PFDA	514.8 > 470.0	8.98e3	8.97e3	0.250	1.160	4.85	4.88	10.0	34.5	86.3
17	17 d5-N-EtFOSAA	588.8 > 419.0	1.69e4	2.08e4	0.250	0.872	5.13	5.12	32.4	149	92.9
18	18 13C2-PFOA	414.8 > 370.0	8.97e3	8.97e3	0.250	1.000	4.22	4.22	10.0	40.0	100.0
19	19 13C4-PFOS	502.8 > 80.2	1.36e4	1.36e4	0.250	1.000	4.63	4.65	28.7	115	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.0	2.08e4	2.08e4	0.250	1.000	5.05	5.00	40.0	160	100.0

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-18.qld

Last Altered: Wednesday, November 07, 2018 10:14:27 Pacific Standard Time

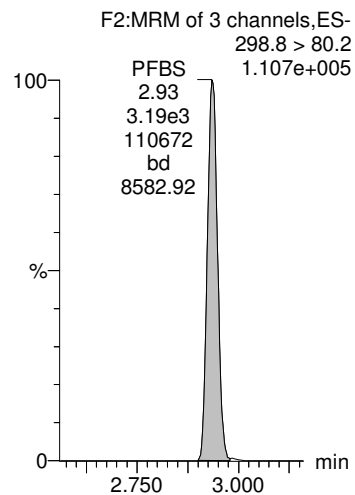
Printed: Wednesday, November 07, 2018 10:16:25 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

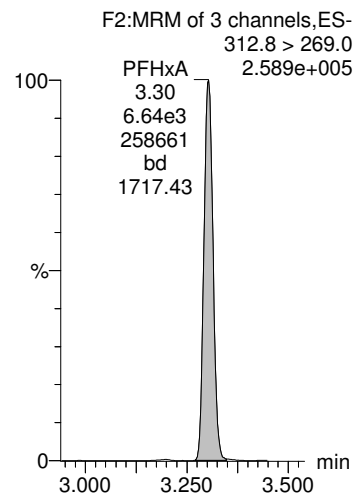
Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_18, Date: 06-Nov-2018, Time: 13:03:55, ID: B8K0017-BS1 LFB 0.25, Description: LFB

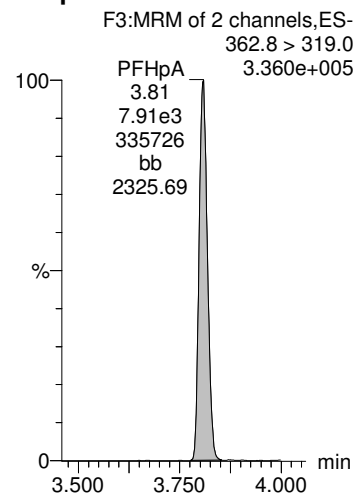
**PFBS**



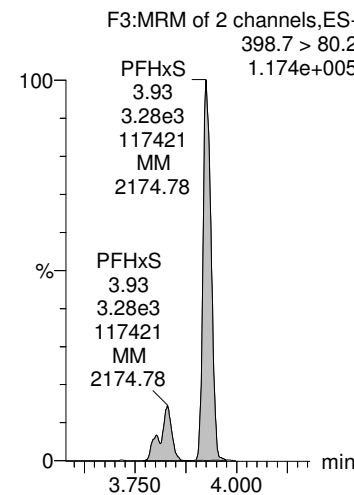
**PFHxA**



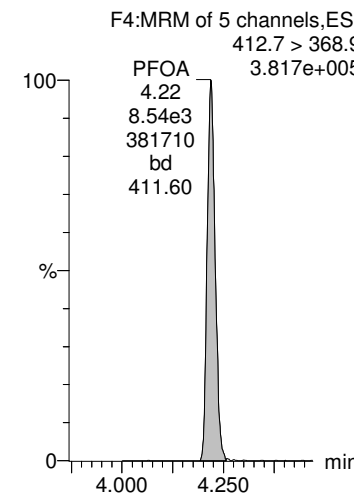
**PFHpA**



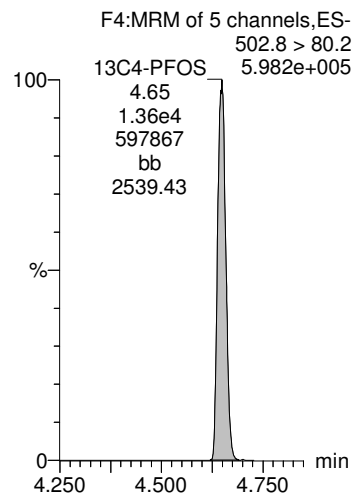
**PFHxS**



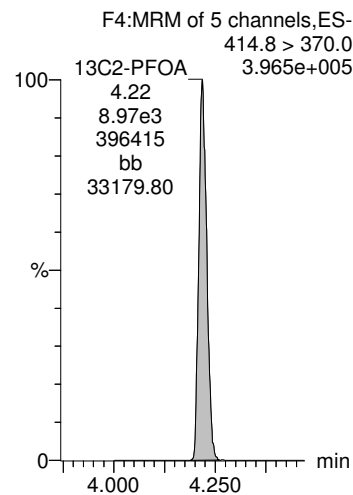
**PFOA**



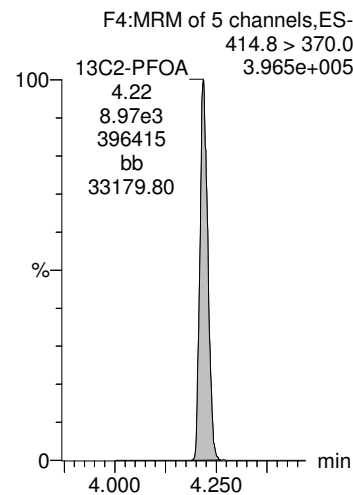
**13C4-PFOS**



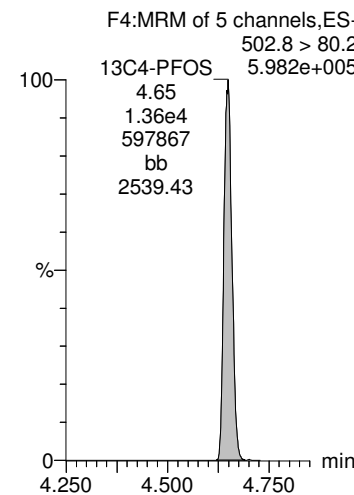
**13C2-PFOA**



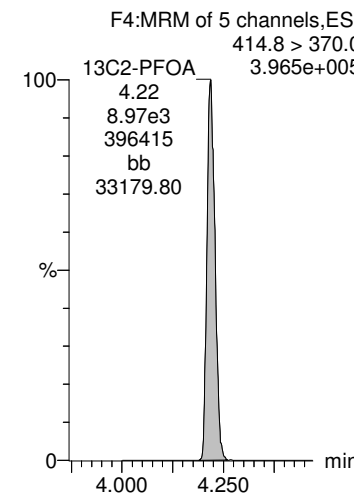
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

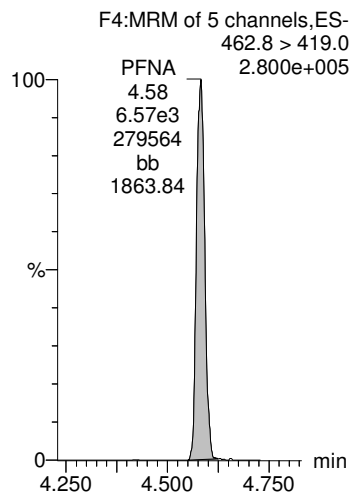


Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-18.qld

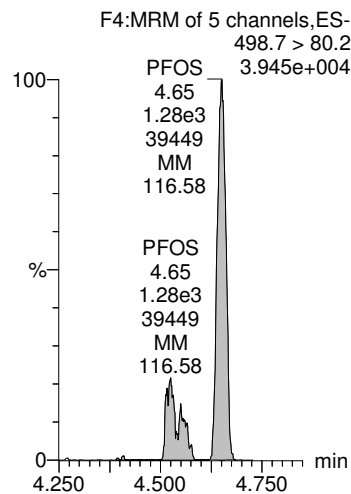
Last Altered: Wednesday, November 07, 2018 10:14:27 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 10:16:25 Pacific Standard Time

Name: 181106G1\_18, Date: 06-Nov-2018, Time: 13:03:55, ID: B8K0017-BS1 LFB 0.25, Description: LFB

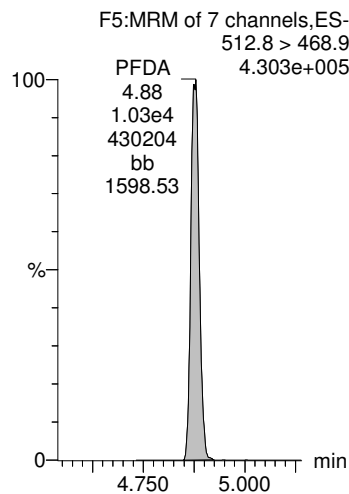
**PFNA**



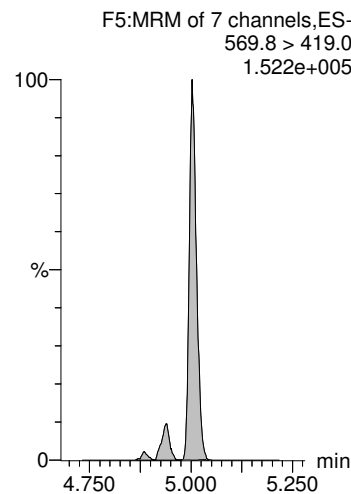
**PFOS**



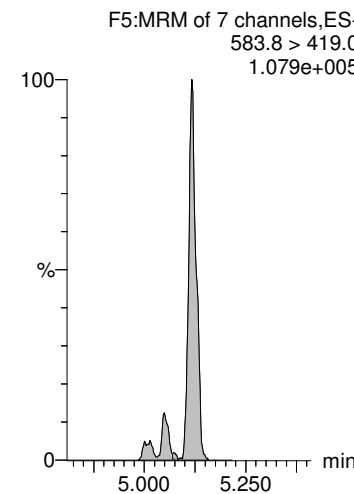
**PFDA**



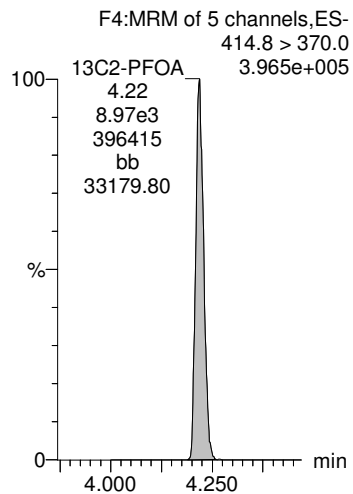
**N-MeFOSAA**



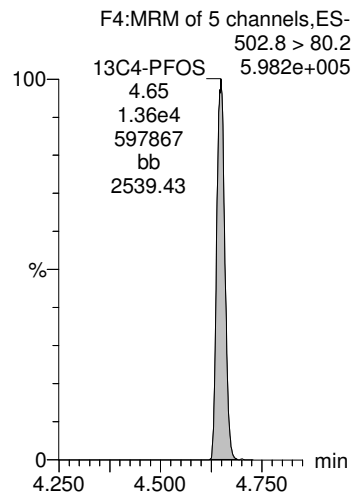
**N-EtFOSAA**



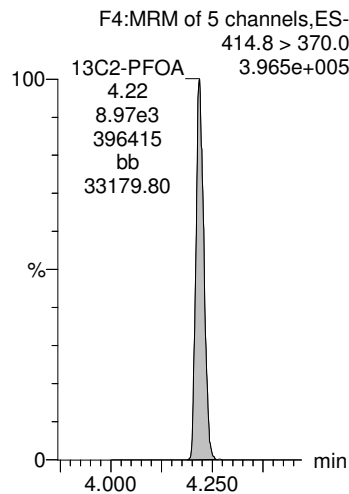
**13C2-PFOA**



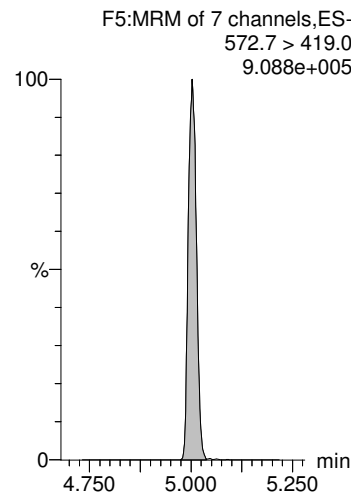
**13C4-PFOS**



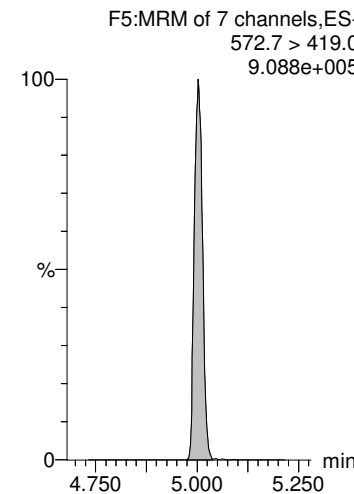
**13C2-PFOA**



**d3-N-MeFOSAA**



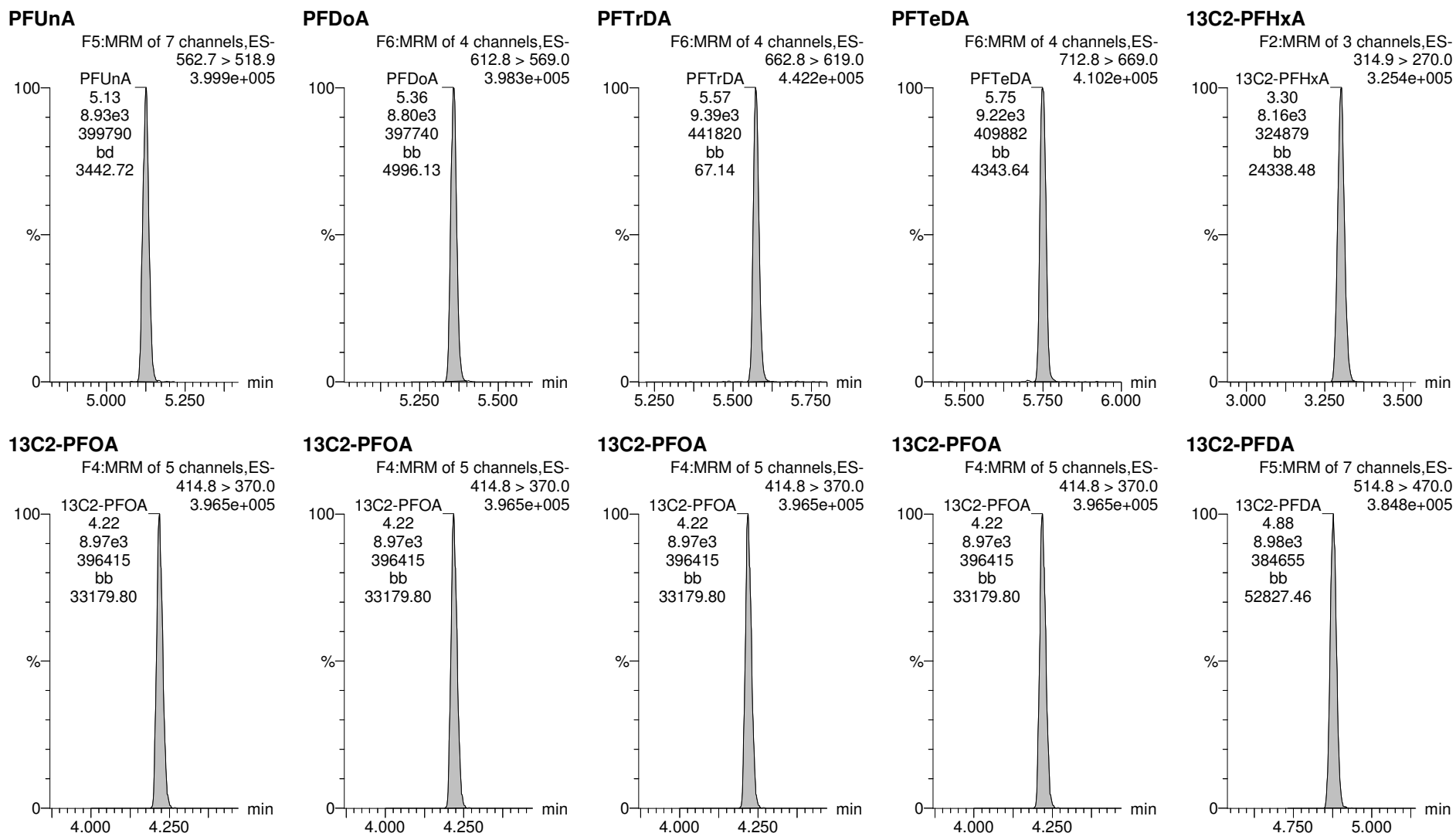
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-18.qld

Last Altered: Wednesday, November 07, 2018 10:14:27 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 10:16:25 Pacific Standard Time

Name: 181106G1\_18, Date: 06-Nov-2018, Time: 13:03:55, ID: B8K0017-BS1 LFB 0.25, Description: LFB



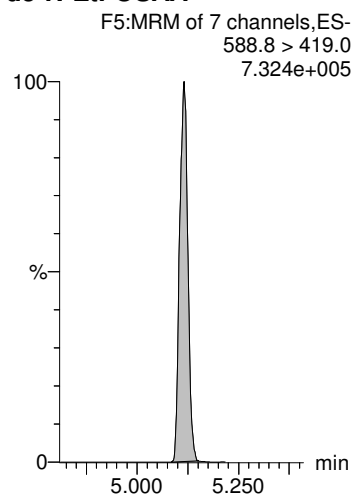
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Last Altered: Wednesday, November 07, 2018 10:14:27 Pacific Standard Time

Printed: Wednesday, November 07, 2018 10:16:25 Pacific Standard Time

Name: 181106G1\_18, Date: 06-Nov-2018, Time: 13:03:55, ID: B8K0017-BS1 LFB 0.25, Description: LFB

**d5-N-EtFOSAA**





Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-3.qld

Last Altered: Thursday, November 08, 2018 10:21:07 Pacific Standard Time  
Printed: Thursday, November 08, 2018 10:25:17 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1107.mdb 08 Nov 2018 10:11:22

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181107G1\_3, Date: 07-Nov-2018, Time: 16:22:04, ID: 1803499-01 CH-AT-1RW202-1118 0.25415, Description: CH-AT-1RW202-1118

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	8.76e0	1.61e4	0.254		2.94	2.93	0.0156	0.0703	
2	5 PFOA	412.7 > 368.9	1.21e2	1.08e4	0.254		4.22	4.22	0.112	0.401	
3	7 PFOS	498.7 > 80.2		1.61e4	0.254		4.64				
4	15 13C2-PFHxA	314.9 > 270.0	8.93e3	1.08e4	0.254	0.897	3.29	3.31	8.31	36.5	92.7
5	16 13C2-PFDA	514.8 > 470.0	1.09e4	1.08e4	0.254	1.160	4.86	4.90	10.1	34.4	87.5
6	17 d5-N-EtFOSAA	588.8 > 419.0	1.60e4	2.40e4	0.254	0.872	5.13	5.09	26.6	120	76.3
7	18 13C2-PFOA	414.8 > 370.0	1.08e4	1.08e4	0.254	1.000	4.22	4.22	10.0	39.3	100.0
8	19 13C4-PFOS	502.8 > 80.2	1.61e4	1.61e4	0.254	1.000	4.64	4.64	28.7	113	100.0
9	20 d3-N-MeFOSAA	572.7 > 419.0	2.40e4	2.40e4	0.254	1.000	5.00	5.00	40.0	157	100.0

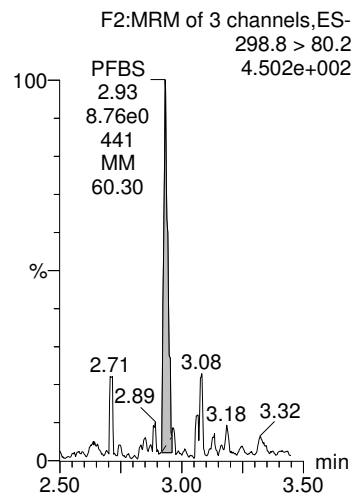
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Printed: Thursday, November 08, 2018 10:25:17 Pacific Standard Time

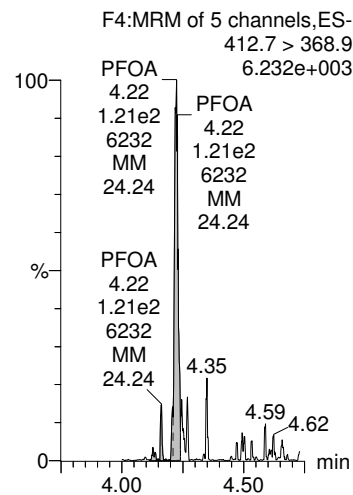
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Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181107G1\_3, Date: 07-Nov-2018, Time: 16:22:04, ID: 1803499-01 CH-AT-1RW202-1118 0.25415, Description: CH-AT-1RW202-1118

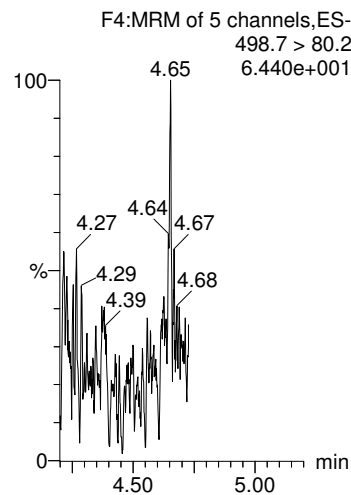
**PFBS**



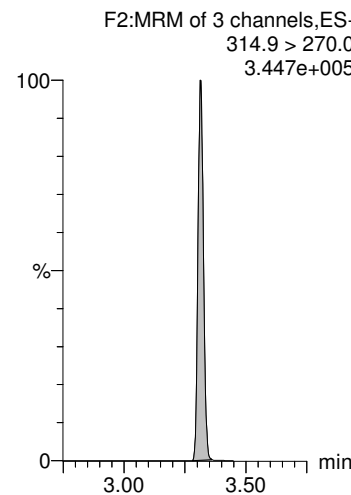
**PFOA**



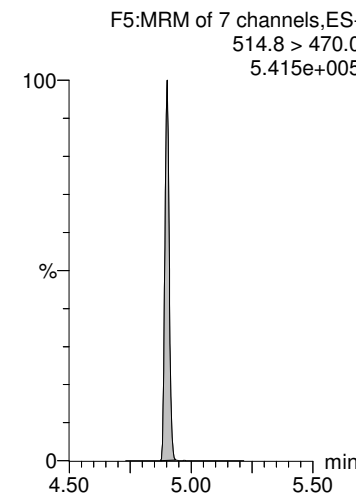
**PFOS**



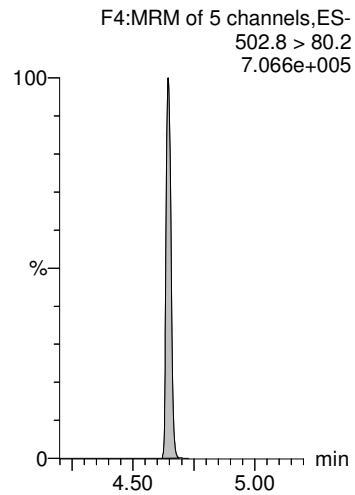
**13C2-PFHxA**



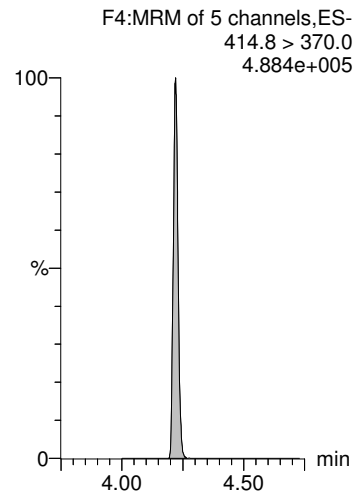
**13C2-PFDA**



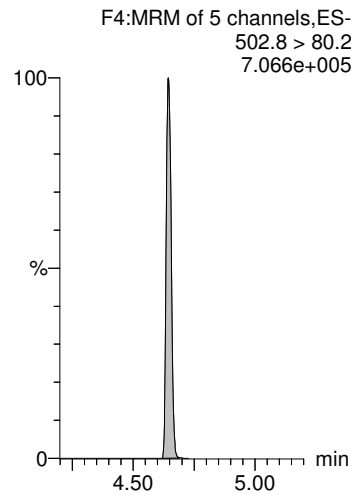
**13C4-PFOS**



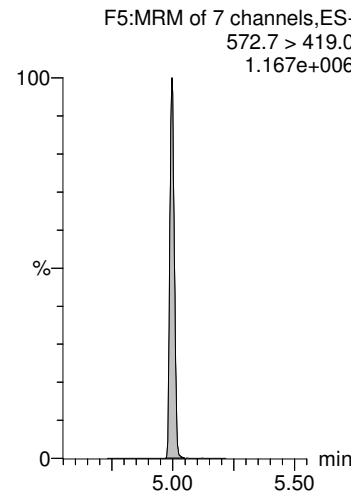
**13C2-PFOA**



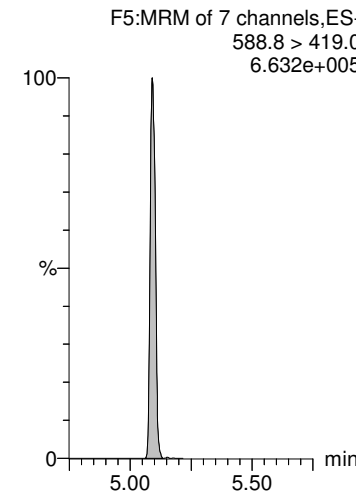
**13C4-PFOS**



**d3-N-MeFOSAA**



**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-20.qld

Last Altered: Wednesday, November 07, 2018 10:46:40 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 13:17:28 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16  
Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_20, Date: 06-Nov-2018, Time: 13:29:49, ID: B8K0017-MS1 LFSM 0.25099, Description: LFSM

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	3.65e3	1.48e4	0.251		2.95	2.94	7.09	32.3	
2	5 PFOA	412.7 > 368.9	9.26e3	9.75e3	0.251		4.22	4.22	9.50	34.3	
3	7 PFOS	498.7 > 80.2	1.47e3	1.48e4	0.251		4.65	4.65	2.85	30.4	
4	15 13C2-PFHxA	314.9 > 270.0	8.74e3	9.75e3	0.251	0.897	3.29	3.30	8.96	39.8	99.9
5	16 13C2-PFDA	514.8 > 470.0	1.07e4	9.75e3	0.251	1.160	4.86	4.88	11.0	37.8	94.9
6	17 d5-N-EtFOSAA	588.8 > 419.0	1.63e4	2.24e4	0.251	0.872	5.14	5.11	29.2	133	83.7
7	18 13C2-PFOA	414.8 > 370.0	9.75e3	9.75e3	0.251	1.000	4.22	4.22	10.0	39.8	100.0
8	19 13C4-PFOS	502.8 > 80.2	1.48e4	1.48e4	0.251	1.000	4.63	4.65	28.7	114	100.0
9	20 d3-N-MeFOSAA	572.7 > 419.0	2.24e4	2.24e4	0.251	1.000	5.05	5.01	40.0	159	100.0

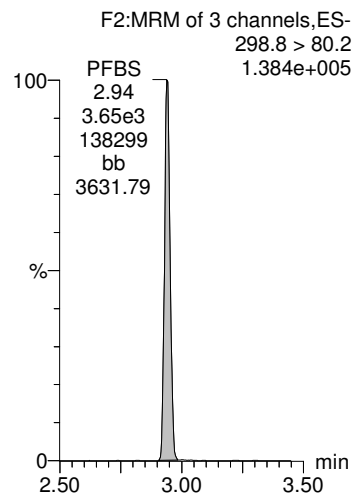
Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-20.qld

Last Altered: Wednesday, November 07, 2018 10:46:40 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 13:17:28 Pacific Standard Time

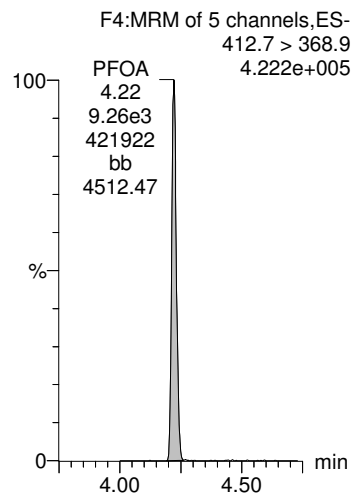
Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16  
Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_20, Date: 06-Nov-2018, Time: 13:29:49, ID: B8K0017-MS1 LFSM 0.25099, Description: LFSM

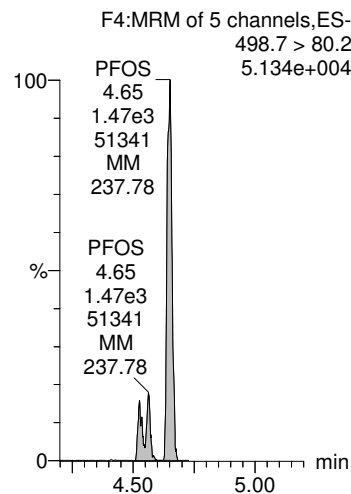
**PFBS**



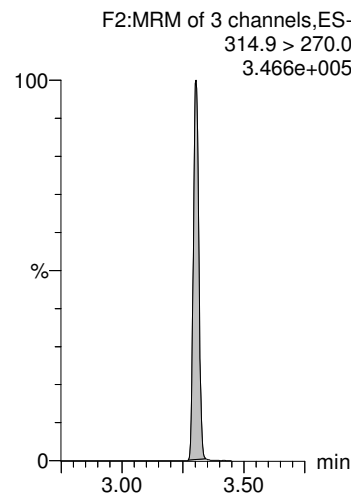
**PFOA**



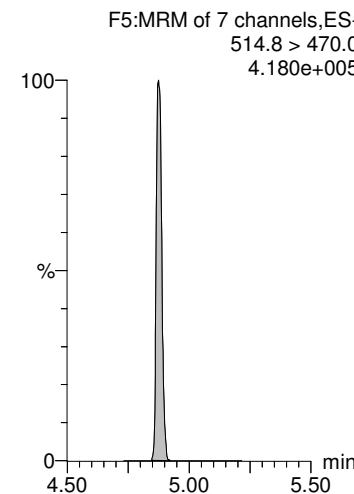
**PFOS**



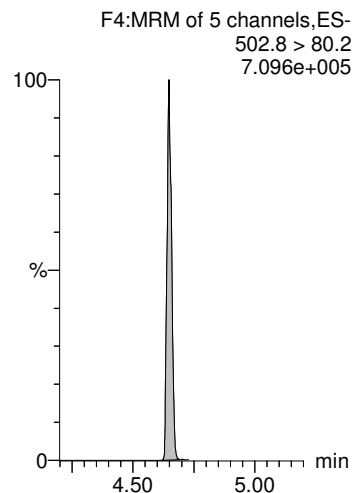
**13C2-PFHxA**



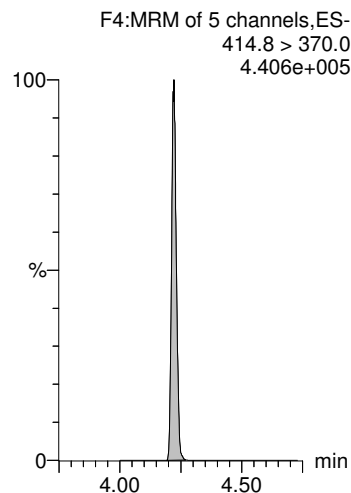
**13C2-PFDA**



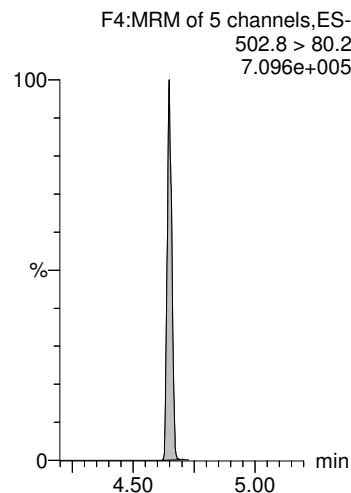
**13C4-PFOS**



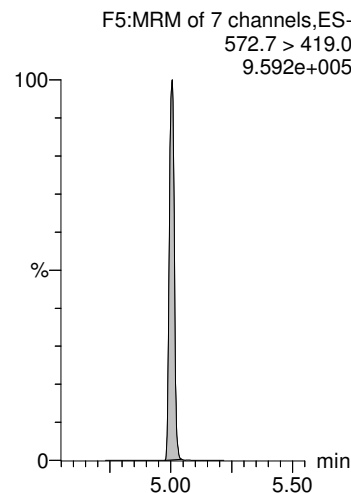
**13C2-PFOA**



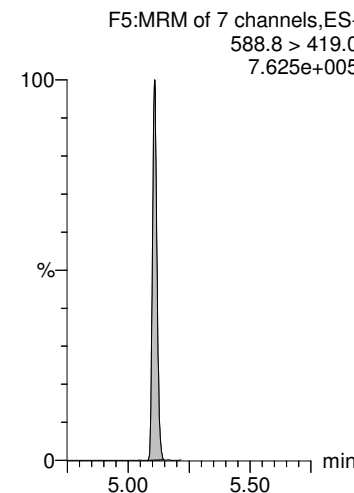
**13C4-PFOS**



**d3-N-MeFOSAA**



**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-21.qld

Last Altered: Wednesday, November 07, 2018 13:12:42 Pacific Standard Time

Printed: Wednesday, November 07, 2018 13:15:39 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_21, Date: 06-Nov-2018, Time: 13:42:47, ID: B8K0017-MSD1 LFSMD 0.25066, Description: LFSMD

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	3.44e3	1.58e4	0.251		2.96	2.94	6.25	28.6	
2	5 PFOA	412.7 > 368.9	9.65e3	1.02e4	0.251		4.22	4.22	9.45	34.2	
3	7 PFOS	498.7 > 80.2	1.49e3	1.58e4	0.251		4.65	4.65	2.70	28.9	
4	15 13C2-PFHxA	314.9 > 270.0	8.96e3	1.02e4	0.251	0.897	3.29	3.30	8.78	39.1	97.9
5	16 13C2-PFDA	514.8 > 470.0	1.10e4	1.02e4	0.251	1.160	4.85	4.88	10.8	37.0	92.8
6	17 d5-N-EtFOSAA	588.8 > 419.0	1.83e4	2.32e4	0.251	0.872	5.13	5.11	31.6	145	90.6
7	18 13C2-PFOA	414.8 > 370.0	1.02e4	1.02e4	0.251	1.000	4.22	4.22	10.0	39.9	100.0
8	19 13C4-PFOS	502.8 > 80.2	1.58e4	1.58e4	0.251	1.000	4.63	4.65	28.7	114	100.0
9	20 d3-N-MeFOSAA	572.7 > 419.0	2.32e4	2.32e4	0.251	1.000	5.05	5.00	40.0	160	100.0

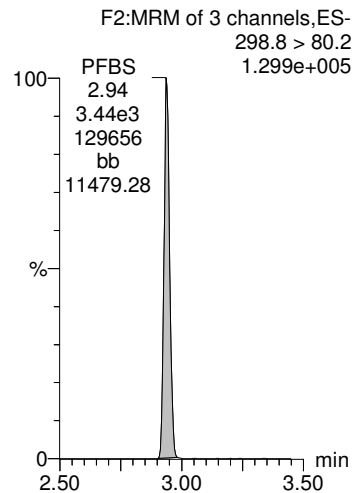
Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-21.qld

Last Altered: Wednesday, November 07, 2018 13:12:42 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 13:15:39 Pacific Standard Time

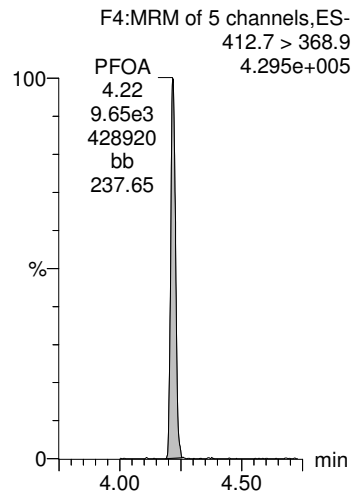
Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16  
Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_21, Date: 06-Nov-2018, Time: 13:42:47, ID: B8K0017-MSD1 LFSMD 0.25066, Description: LFSMD

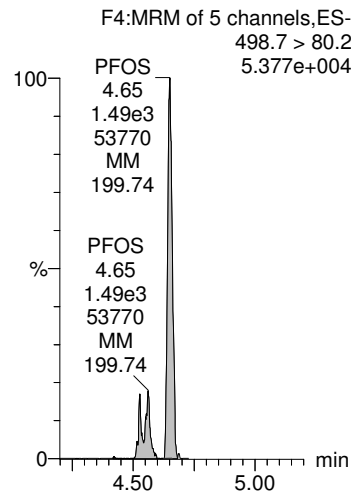
**PFBS**



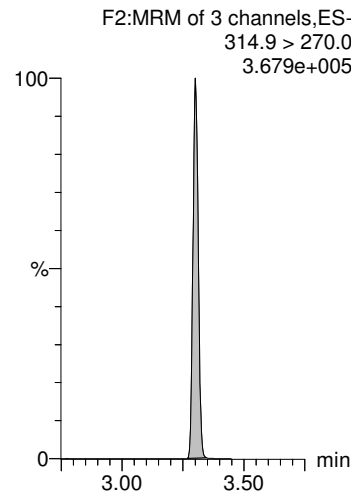
**PFOA**



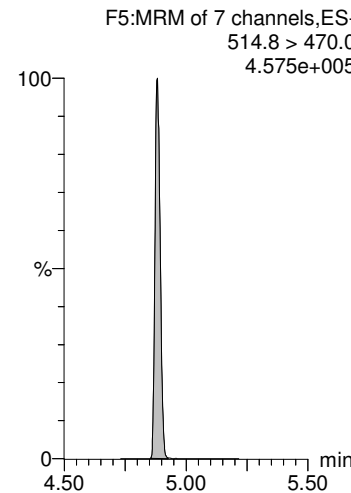
**PFOS**



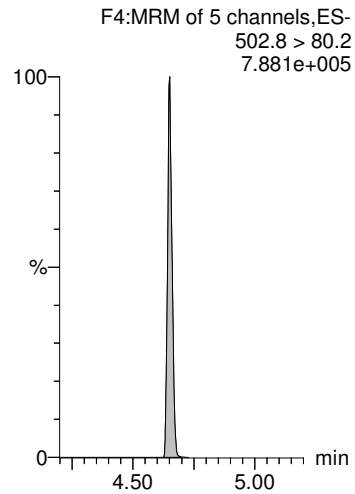
**13C2-PFHxA**



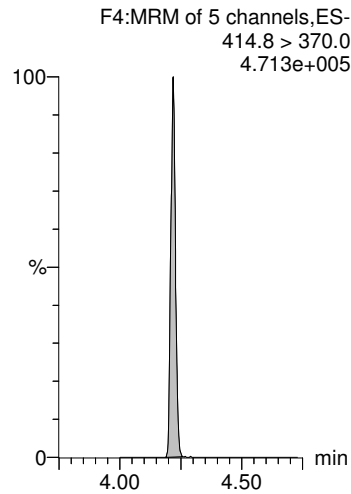
**13C2-PFDA**



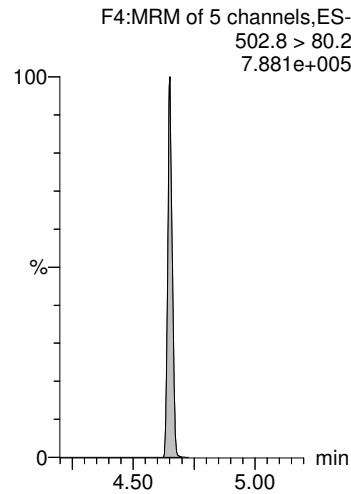
**13C4-PFOS**



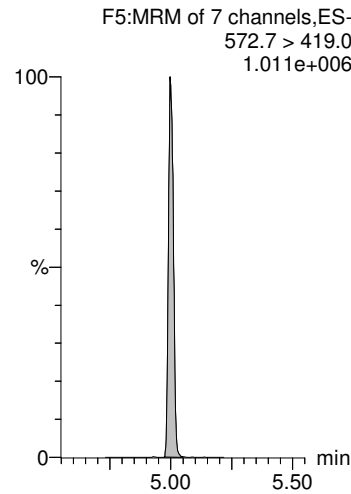
**13C2-PFOA**



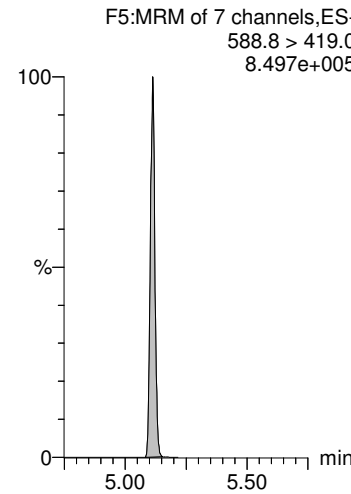
**13C4-PFOS**



**d3-N-MeFOSAA**



**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-23.qld

Last Altered: Wednesday, November 07, 2018 13:19:10 Pacific Standard Time

Printed: Wednesday, November 07, 2018 13:20:27 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_23, Date: 06-Nov-2018, Time: 14:08:37, ID: 1803499-02 CH-AT-1FB202-1118 0.25611, Description: CH-AT-1FB202-1118

	# Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	1.84e0	1.37e4	0.256		2.96	2.94	0.00384	0.0172	
2	5 PFOA	412.7 > 368.9	6.28e1	9.60e3	0.256		4.22	4.22	0.0654	0.232	
3	7 PFOS	498.7 > 80.2		1.37e4	0.256		4.65				
4	15 13C2-PFHxA	314.9 > 270.0	7.96e3	9.60e3	0.256	0.897	3.29	3.30	8.29	36.1	92.4
5	16 13C2-PFDA	514.8 > 470.0	9.64e3	9.60e3	0.256	1.160	4.86	4.88	10.0	33.8	86.5
6	17 d5-N-EtFOSAA	588.8 > 419.0	1.91e4	2.28e4	0.256	0.872	5.12	5.11	33.4	150	95.8
7	18 13C2-PFOA	414.8 > 370.0	9.60e3	9.60e3	0.256	1.000	4.22	4.22	10.0	39.0	100.0
8	19 13C4-PFOS	502.8 > 80.2	1.37e4	1.37e4	0.256	1.000	4.63	4.65	28.7	112	100.0
9	20 d3-N-MeFOSAA	572.7 > 419.0	2.28e4	2.28e4	0.256	1.000	5.05	4.99	40.0	156	100.0

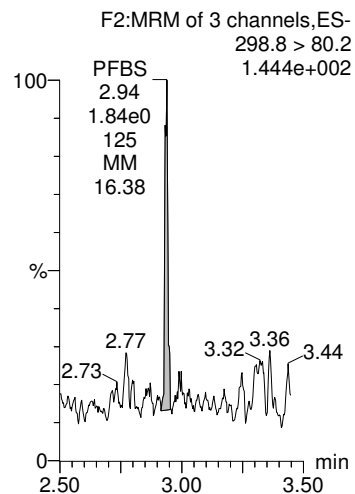
Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-23.qld

Last Altered: Wednesday, November 07, 2018 13:19:10 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 13:20:27 Pacific Standard Time

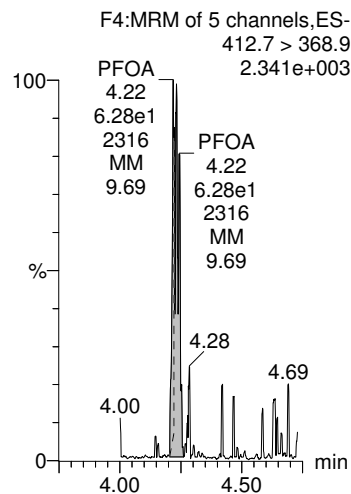
Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16  
Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_23, Date: 06-Nov-2018, Time: 14:08:37, ID: 1803499-02 CH-AT-1FB202-1118 0.25611, Description: CH-AT-1FB202-1118

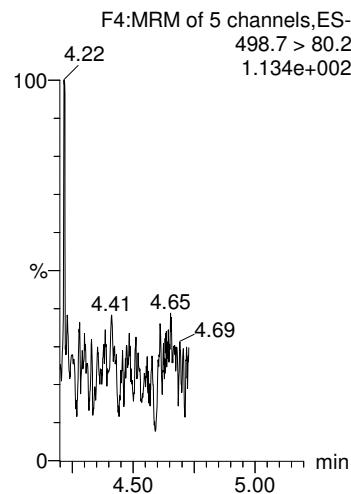
**PFBS**



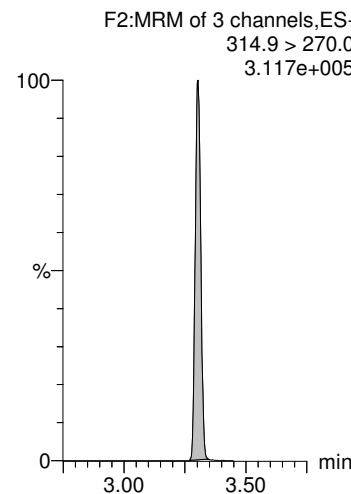
**PFOA**



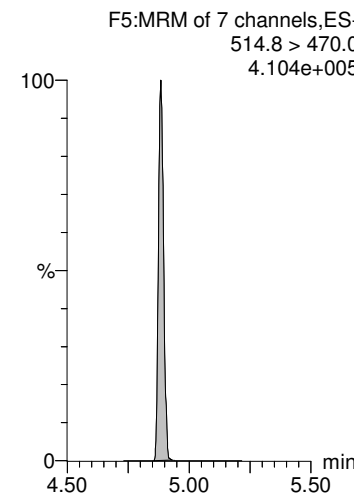
**PFOS**



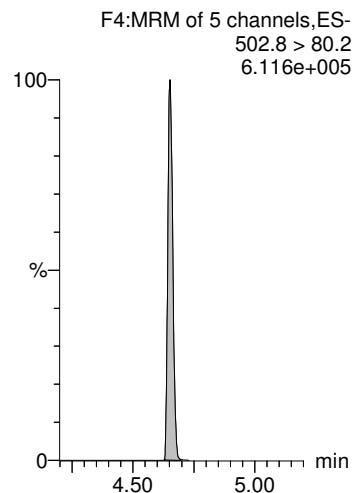
**13C2-PFHxA**



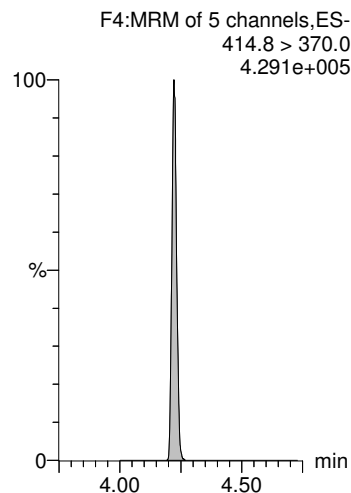
**13C2-PFDA**



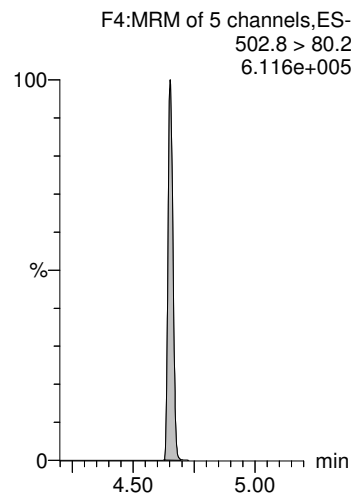
**13C4-PFOS**



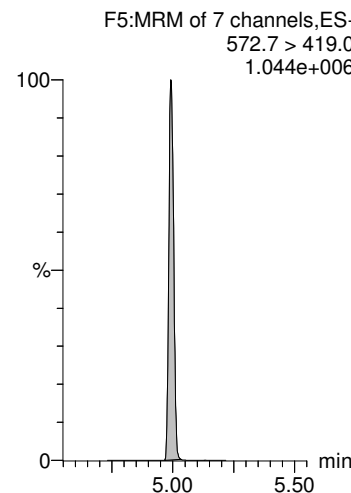
**13C2-PFOA**



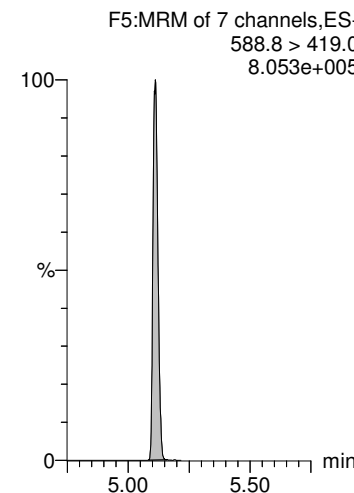
**13C4-PFOS**



**d3-N-MeFOSAA**



**d5-N-EtFOSAA**





**INJECTION INTERNAL STANDARD (IIS) AREAS,  
AND  
CONTINUING CALIBRATION VERIFICATIONS (CCV)**

## ICAL

## Compound 18: 13C2-PFOA

50-150%

ID	Name	Type	Std. Conc	RT	Area	ICAL Area	% Area
1 IPA	181106G1_1	Analyte	10.0			8621.56	0.00
2 ST181106G1-1 PFC CS-1 537 18J1832	181106G1_2	Analyte	10.0	4.22	9332.52	8621.56	108.25
3 B8K0002-BS1 LFB 0.25	181106G1_3	Analyte	10.0	4.22	10192.27	8621.56	118.22
4 B8K0002-BSD1 LFB 0.25	181106G1_4	Analyte	10.0	4.22	9957.39	8621.56	115.49
5 B8K0002-BLK1 LRB 0.25	181106G1_5	Analyte	10.0	4.22	10202.27	8621.56	118.33
6 1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	181106G1_6	Analyte	10.0	4.22	10054.77	8621.56	116.62
7 1803480-02 WI-CV-1RW90-MID02-103018 0.24449	181106G1_7	Analyte	10.0	4.22	10768.82	8621.56	124.91
8 1803480-03 WI-CV-1RW90-MID01-103018 0.24119	181106G1_8	Analyte	10.0	4.22	10469.09	8621.56	121.43
9 1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	181106G1_9	Analyte	10.0	4.22	9529.78	8621.56	110.53
10 1803480-05 WI-CV-1RW90-INF01-103018 0.24639	181106G1_10	Analyte	10.0	4.22	9607.88	8621.56	111.44
11 1803480-06 WI-CV-1FB90-103018 0.24089	181106G1_11	Analyte	10.0	4.22	9690.73	8621.56	112.40
12 1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	181106G1_12	Analyte	10.0	4.22	11307.94	8621.56	131.16
13 1803480-08 WI-CV-1RW90-MID202-103018 0.24794	181106G1_13	Analyte	10.0	4.22	9261.20	8621.56	107.42
14 1803480-09 WI-CV-1RW90-MID201-103018 0.23283	181106G1_14	Analyte	10.0	4.22	9502.18	8621.56	110.21
15 1803480-10 WI-CV-1RW90-INF201-103018 0.24673	181106G1_15	Analyte	10.0	4.22	8522.42	8621.56	98.85
16 IPA	181106G1_16	Analyte	10.0			8621.56	0.00
17 ST181106G1-2 PFC CS1 537 18J1834	181106G1_17	Analyte	10.0	4.22	9691.39	8621.56	112.41
18 B8K0017-BS1 LFB 0.25	181106G1_18	Analyte	10.0	4.22	8967.45	8621.56	104.01
19 B8K0017-BLK1 LRB 0.25	181106G1_19	Analyte	10.0	4.22	9186.09	8621.56	106.55
20 B8K0017-MS1 LFSM 0.25099	181106G1_20	Analyte	10.0	4.22	9752.45	8621.56	113.12
21 B8K0017-MSD1 LFSMD 0.25066	181106G1_21	Analyte	10.0	4.22	10206.91	8621.56	118.39
22 1803499-01 CH-AT-1RW202-1118 0.25415	181106G1_22	Analyte	10.0	4.22	9084.90	8621.56	105.37
23 1803499-02 CH-AT-1FB202-1118 0.25611	181106G1_23	Analyte	10.0	4.22	9603.63	8621.56	111.39
24 B8K0010-BS1 LFB 0.25	181106G1_24	Analyte	10.0	4.22	10195.40	8621.56	118.25
25 B8K0010-BSD1 LFB 0.25	181106G1_25	Analyte	10.0	4.22	9453.66	8621.56	109.65
26 B8K0010-BLK1 LRB 0.25	181106G1_26	Analyte	10.0	4.22	9515.07	8621.56	110.36
27 1803399-01RE1 GWNT1810191000MK 0.27114	181106G1_27	Analyte	10.0	4.22	9424.99	8621.56	109.32
28 B8J0237-BS1 LFB 0.25	181106G1_28	Analyte	10.0	4.22	9048.47	8621.56	104.95
29 B8J0237-BSD1 LFB 0.25	181106G1_29	Analyte	10.0	4.22	9546.79	8621.56	110.73

30	B8J0237-BLK1 LRB 0.25	181106G1_30	Analyte	10.0	4.22	10049.25	8621.56	116.56
31	1803444-01 SWEF1810230955KME 0.25579	181106G1_31	Analyte	10.0	4.23	9120.57	8621.56	105.79
32	1803446-01 SWEF1810231040KME 0.2539	181106G1_32	Analyte	10.0	4.22	9772.43	8621.56	113.35
33	1803448-01 SWEF1810241320KME 0.24657	181106G1_33	Analyte	10.0	4.22	9864.14	8621.56	114.41
34	1803450-01 SWEF1810250910KME 0.25109	181106G1_34	Analyte	10.0	4.22	9892.53	8621.56	114.74
35	1803452-01 SWEF1810251045KME 0.24905	181106G1_35	Analyte	10.0	4.23	9758.88	8621.56	113.19
36	1803454-01 SWEF1810251125KME 0.25124	181106G1_36	Analyte	10.0	4.22	9168.05	8621.56	106.34
37	1803456-01 SWEF1810251215KME 0.24968	181106G1_37	Analyte	10.0	4.23	9826.29	8621.56	113.97
38	IPA	181106G1_38	Analyte	10.0			8621.56	0.00
39	ST181106G1-3 PFC CS3 537 18J1836	181106G1_39	Analyte	10.0	4.22	8808.34	8621.56	102.17
40	1803458-01 SWEF1810251255KME 0.25378	181106G1_40	Analyte	10.0	4.22	9584.52	8621.56	111.17
41	IPA	181106G1_41	Analyte	10.0			8621.56	0.00
42	ST181106G1-4 PFC CS-1 537 18J1832	181106G1_42	Analyte	10.0	4.22	9275.02	8621.56	107.58

### Compound 19: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	ICAL Area	% Area	
1	IPA	181106G1_1	Analyte	28.7		12936.20	0.00	
2	ST181106G1-1 PFC CS-1 537 18J1832	181106G1_2	Analyte	28.7	4.63	13568.34	12936.20	104.89
3	B8K0002-BS1 LFB 0.25	181106G1_3	Analyte	28.7	4.65	15881.60	12936.20	122.77
4	B8K0002-BSD1 LFBD 0.25	181106G1_4	Analyte	28.7	4.65	13656.84	12936.20	105.57
5	B8K0002-BLK1 LRB 0.25	181106G1_5	Analyte	28.7	4.65	15360.25	12936.20	118.74
6	1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	181106G1_6	Analyte	28.7	4.65	15175.78	12936.20	117.31
7	1803480-02 WI-CV-1RW90-MID02-103018 0.24449	181106G1_7	Analyte	28.7	4.65	15005.10	12936.20	115.99
8	1803480-03 WI-CV-1RW90-MID01-103018 0.24119	181106G1_8	Analyte	28.7	4.65	15003.36	12936.20	115.98
9	1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	181106G1_9	Analyte	28.7	4.65	14150.55	12936.20	109.39
10	1803480-05 WI-CV-1RW90-INF01-103018 0.24639	181106G1_10	Analyte	28.7	4.65	14848.44	12936.20	114.78
11	1803480-06 WI-CV-1FB90-103018 0.24089	181106G1_11	Analyte	28.7	4.64	14865.92	12936.20	114.92
12	1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	181106G1_12	Analyte	28.7	4.65	16038.06	12936.20	123.98
13	1803480-08 WI-CV-1RW90-MID202-103018 0.24794	181106G1_13	Analyte	28.7	4.65	13664.81	12936.20	105.63
14	1803480-09 WI-CV-1RW90-MID201-103018 0.23283	181106G1_14	Analyte	28.7	4.66	14537.10	12936.20	112.38
15	1803480-10 WI-CV-1RW90-INF201-103018 0.24673	181106G1_15	Analyte	28.7	4.65	13829.34	12936.20	106.90
16	IPA	181106G1_16	Analyte	28.7			12936.20	0.00
17	ST181106G1-2 PFC CS1 537 18J1834	181106G1_17	Analyte	28.7	4.65	13481.00	12936.20	104.21
18	B8K0017-BS1 LFB 0.25	181106G1_18	Analyte	28.7	4.65	13603.83	12936.20	105.16

19	B8K0017-BLK1 LRB 0.25	181106G1_19	Analyte	28.7	4.65	15175.57	12936.20	117.31
20	B8K0017-MS1 LFSM 0.25099	181106G1_20	Analyte	28.7	4.65	14784.24	12936.20	114.29
21	B8K0017-MSD1 LFSMD 0.25066	181106G1_21	Analyte	28.7	4.65	15776.73	12936.20	121.96
22	1803499-01 CH-AT-1RW202-1118 0.25415	181106G1_22	Analyte	28.7	4.65	13950.72	12936.20	107.84
23	1803499-02 CH-AT-1FB202-1118 0.25611	181106G1_23	Analyte	28.7	4.65	13736.66	12936.20	106.19
24	B8K0010-BS1 LFB 0.25	181106G1_24	Analyte	28.7	4.65	15650.59	12936.20	120.98
25	B8K0010-BSD1 LFBD 0.25	181106G1_25	Analyte	28.7	4.66	13177.19	12936.20	101.86
26	B8K0010-BLK1 LRB 0.25	181106G1_26	Analyte	28.7	4.65	14661.11	12936.20	113.33
27	1803399-01RE1 GWNT1810191000MK 0.27114	181106G1_27	Analyte	28.7	4.65	13780.32	12936.20	106.53
28	B8J0237-BS1 LFB 0.25	181106G1_28	Analyte	28.7	4.65	14486.82	12936.20	111.99
29	B8J0237-BSD1 LFBD 0.25	181106G1_29	Analyte	28.7	4.65	15401.76	12936.20	119.06
30	B8J0237-BLK1 LRB 0.25	181106G1_30	Analyte	28.7	4.65	16106.12	12936.20	124.50
31	1803444-01 SWEF1810230955KME 0.25579	181106G1_31	Analyte	28.7	4.65	15363.50	12936.20	118.76
32	1803446-01 SWEF1810231040KME 0.2539	181106G1_32	Analyte	28.7	4.65	14833.73	12936.20	114.67
33	1803448-01 SWEF1810241320KME 0.24657	181106G1_33	Analyte	28.7	4.65	14726.53	12936.20	113.84
34	1803450-01 SWEF1810250910KME 0.25109	181106G1_34	Analyte	28.7	4.65	14847.85	12936.20	114.78
35	1803452-01 SWEF1810251045KME 0.24905	181106G1_35	Analyte	28.7	4.65	13820.56	12936.20	106.84
36	1803454-01 SWEF1810251125KME 0.25124	181106G1_36	Analyte	28.7	4.65	14288.86	12936.20	110.46
37	1803456-01 SWEF1810251215KME 0.24968	181106G1_37	Analyte	28.7	4.65	15416.04	12936.20	119.17
38	IPA	181106G1_38	Analyte	28.7			12936.20	0.00
39	ST181106G1-3 PFC CS3 537 18J1836	181106G1_39	Analyte	28.7	4.64	11946.39	12936.20	92.35
40	1803458-01 SWEF1810251255KME 0.25378	181106G1_40	Analyte	28.7	4.65	13808.53	12936.20	106.74
41	IPA	181106G1_41	Analyte	28.7			12936.20	0.00
42	ST181106G1-4 PFC CS-1 537 18J1832	181106G1_42	Analyte	28.7	4.65	12853.73	12936.20	99.36

### Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std. Conc	RT	Area	ICAL Area	% Area	
1	IPA	181106G1_1	Analyte	40		18879.71	0.00	
2	ST181106G1-1 PFC CS-1 537 18J1832	181106G1_2	Analyte	40	5.05	18667.07	18879.71	98.87
3	B8K0002-BS1 LFB 0.25	181106G1_3	Analyte	40	5.04	23853.71	18879.71	126.35
4	B8K0002-BSD1 LFBD 0.25	181106G1_4	Analyte	40	5.03	23395.77	18879.71	123.92
5	B8K0002-BLK1 LRB 0.25	181106G1_5	Analyte	40	5.03	23581	18879.71	124.90
6	1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	181106G1_6	Analyte	40	5.02	22681.46	18879.71	120.14
7	1803480-02 WI-CV-1RW90-MID02-103018 0.24449	181106G1_7	Analyte	40	5.03	24944.62	18879.71	132.12

8	1803480-03 WI-CV-1RW90-MID01-103018 0.24119	181106G1_8	Analyte	40	5.03	22419.33	18879.71	118.75
9	1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	181106G1_9	Analyte	40	5.02	24658.07	18879.71	130.61
10	1803480-05 WI-CV-1RW90-INF01-103018 0.24639	181106G1_10	Analyte	40	5.02	24271.18	18879.71	128.56
11	1803480-06 WI-CV-1FB90-103018 0.24089	181106G1_11	Analyte	40	5.01	24771.99	18879.71	131.21
12	1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	181106G1_12	Analyte	40	5.01	25824.12	18879.71	136.78
13	1803480-08 WI-CV-1RW90-MID202-103018 0.24794	181106G1_13	Analyte	40	5.01	22350.13	18879.71	118.38
14	1803480-09 WI-CV-1RW90-MID201-103018 0.23283	181106G1_14	Analyte	40	5.01	23363.39	18879.71	123.75
15	1803480-10 WI-CV-1RW90-INF201-103018 0.24673	181106G1_15	Analyte	40	5.01	21364.45	18879.71	113.16
16	IPA	181106G1_16	Analyte	40			18879.71	0.00
17	ST181106G1-2 PFC CS1 537 18J1834	181106G1_17	Analyte	40	5	21519.68	18879.71	113.98
18	B8K0017-BS1 LFB 0.25	181106G1_18	Analyte	40	5	20816.73	18879.71	110.26
19	B8K0017-BLK1 LRB 0.25	181106G1_19	Analyte	40	5	21575.55	18879.71	114.28
20	B8K0017-MS1 LFSM 0.25099	181106G1_20	Analyte	40	5.01	22386.13	18879.71	118.57
21	B8K0017-MSD1 LFSMD 0.25066	181106G1_21	Analyte	40	5	23221.24	18879.71	123.00
22	1803499-01 CH-AT-1RW202-1118 0.25415	181106G1_22	Analyte	40	4.99	23847.22	18879.71	126.31
23	1803499-02 CH-AT-1FB202-1118 0.25611	181106G1_23	Analyte	40	4.99	22835.28	18879.71	120.95
24	B8K0010-BS1 LFB 0.25	181106G1_24	Analyte	40	5	23922.61	18879.71	126.71
25	B8K0010-BSD1 LFBD 0.25	181106G1_25	Analyte	40	5	22219.95	18879.71	117.69
26	B8K0010-BLK1 LRB 0.25	181106G1_26	Analyte	40	5	23505.63	18879.71	124.50
27	1803399-01RE1 GWNT1810191000MK 0.27114	181106G1_27	Analyte	40	5	22393.13	18879.71	118.61
28	B8J0237-BS1 LFB 0.25	181106G1_28	Analyte	40	5	22204.18	18879.71	117.61
29	B8J0237-BSD1 LFBD 0.25	181106G1_29	Analyte	40	5	23908.17	18879.71	126.63
30	B8J0237-BLK1 LRB 0.25	181106G1_30	Analyte	40	5	25870.06	18879.71	137.03
31	1803444-01 SWEF1810230955KME 0.25579	181106G1_31	Analyte	40	5	22378.75	18879.71	118.53
32	1803446-01 SWEF1810231040KME 0.2539	181106G1_32	Analyte	40	5	23708.97	18879.71	125.58
33	1803448-01 SWEF1810241320KME 0.24657	181106G1_33	Analyte	40	5	23601.65	18879.71	125.01
34	1803450-01 SWEF1810250910KME 0.25109	181106G1_34	Analyte	40	5	22947.91	18879.71	121.55
35	1803452-01 SWEF1810251045KME 0.24905	181106G1_35	Analyte	40	5	22086.79	18879.71	116.99
36	1803454-01 SWEF1810251125KME 0.25124	181106G1_36	Analyte	40	5	22881.75	18879.71	121.20
37	1803456-01 SWEF1810251215KME 0.24968	181106G1_37	Analyte	40	5.01	21978.53	18879.71	116.41
38	IPA	181106G1_38	Analyte	40			18879.71	0.00
39	ST181106G1-3 PFC CS3 537 18J1836	181106G1_39	Analyte	40	5.01	22783.11	18879.71	120.68
40	1803458-01 SWEF1810251255KME 0.25378	181106G1_40	Analyte	40	5	23097.73	18879.71	122.34
41	IPA	181106G1_41	Analyte	40			18879.71	0.00
42	ST181106G1-4 PFC CS-1 537 18J1832	181106G1_42	Analyte	40	5.01	20848.59	18879.71	110.43

# CCAL

## Compound 18: 13C2-PFOA

70-140%

ID	Name	Type	Std. Conc	RT	Area	CCAL Area	% Area
1 IPA	181106G1_1	Analyte	10.0			8621.56	0.00
2 <b>ST181106G1-1 PFC CS-1 537 18J1832</b>	181106G1_2	Analyte	10.0	4.22	9332.52	8621.56	108.25
3 B8K0002-BS1 LFB 0.25	181106G1_3	Analyte	10.0	4.22	10192.27	8621.56	118.22
4 B8K0002-BSD1 LFB 0.25	181106G1_4	Analyte	10.0	4.22	9957.39	8621.56	115.49
5 B8K0002-BLK1 LRB 0.25	181106G1_5	Analyte	10.0	4.22	10202.27	8621.56	118.33
6 1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	181106G1_6	Analyte	10.0	4.22	10054.77	8621.56	116.62
7 1803480-02 WI-CV-1RW90-MID02-103018 0.24449	181106G1_7	Analyte	10.0	4.22	10768.82	8621.56	124.91
8 1803480-03 WI-CV-1RW90-MID01-103018 0.24119	181106G1_8	Analyte	10.0	4.22	10469.09	8621.56	121.43
9 1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	181106G1_9	Analyte	10.0	4.22	9529.78	8621.56	110.53
10 1803480-05 WI-CV-1RW90-INF01-103018 0.24639	181106G1_10	Analyte	10.0	4.22	9607.88	8621.56	111.44
11 1803480-06 WI-CV-1FB90-103018 0.24089	181106G1_11	Analyte	10.0	4.22	9690.73	8621.56	112.40
12 1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	181106G1_12	Analyte	10.0	4.22	11307.94	8621.56	131.16
13 1803480-08 WI-CV-1RW90-MID202-103018 0.24794	181106G1_13	Analyte	10.0	4.22	9261.20	8621.56	107.42
14 1803480-09 WI-CV-1RW90-MID201-103018 0.23283	181106G1_14	Analyte	10.0	4.22	9502.18	8621.56	110.21
15 1803480-10 WI-CV-1RW90-INF201-103018 0.24673	181106G1_15	Analyte	10.0	4.22	8522.42	8621.56	98.85
16 IPA	181106G1_16	Analyte	10.0			8621.56	0.00
17 <b>ST181106G1-2 PFC CS1 537 18J1834</b>	181106G1_17	Analyte	10.0	4.22	9691.39	8621.56	112.41
17 <b>ST181106G1-2 PFC CS1 537 18J1834</b>	181106G1_17	Analyte	10.0	4.22	9691.39	8621.56	112.41
18 B8K0017-BS1 LFB 0.25	181106G1_18	Analyte	10.0	4.22	8967.45	8621.56	104.01
19 B8K0017-BLK1 LRB 0.25	181106G1_19	Analyte	10.0	4.22	9186.09	8621.56	106.55
20 B8K0017-MS1 LFSM 0.25099	181106G1_20	Analyte	10.0	4.22	9752.45	8621.56	113.12
21 B8K0017-MSD1 LFSMD 0.25066	181106G1_21	Analyte	10.0	4.22	10206.91	8621.56	118.39
22 1803499-01 CH-AT-1RW202-1118 0.25415	181106G1_22	Analyte	10.0	4.22	9084.90	8621.56	105.37
23 1803499-02 CH-AT-1FB202-1118 0.25611	181106G1_23	Analyte	10.0	4.22	9603.63	8621.56	111.39
24 B8K0010-BS1 LFB 0.25	181106G1_24	Analyte	10.0	4.22	10195.40	8621.56	118.25
25 B8K0010-BSD1 LFB 0.25	181106G1_25	Analyte	10.0	4.22	9453.66	8621.56	109.65
26 B8K0010-BLK1 LRB 0.25	181106G1_26	Analyte	10.0	4.22	9515.07	8621.56	110.36

27	1803399-01RE1 GWNT1810191000MK 0.27114	181106G1_27	Analyte	10.0	4.22	9424.99	8621.56	109.32
28	B8J0237-BS1 LFB 0.25	181106G1_28	Analyte	10.0	4.22	9048.47	8621.56	104.95
29	B8J0237-BSD1 LFB 0.25	181106G1_29	Analyte	10.0	4.22	9546.79	8621.56	110.73
30	B8J0237-BLK1 LRB 0.25	181106G1_30	Analyte	10.0	4.22	10049.25	8621.56	116.56
31	1803444-01 SWEF1810230955KME 0.25579	181106G1_31	Analyte	10.0	4.23	9120.57	8621.56	105.79
32	1803446-01 SWEF1810231040KME 0.2539	181106G1_32	Analyte	10.0	4.22	9772.43	8621.56	113.35
33	1803448-01 SWEF1810241320KME 0.24657	181106G1_33	Analyte	10.0	4.22	9864.14	8621.56	114.41
34	1803450-01 SWEF1810250910KME 0.25109	181106G1_34	Analyte	10.0	4.22	9892.53	8621.56	114.74
35	1803452-01 SWEF1810251045KME 0.24905	181106G1_35	Analyte	10.0	4.23	9758.88	8621.56	113.19
36	1803454-01 SWEF1810251125KME 0.25124	181106G1_36	Analyte	10.0	4.22	9168.05	8621.56	106.34
37	1803456-01 SWEF1810251215KME 0.24968	181106G1_37	Analyte	10.0	4.23	9826.29	8621.56	113.97
38	IPA	181106G1_38	Analyte	10.0			8621.56	0.00
39	ST181106G1-3 PFC CS3 537 18J1836	181106G1_39	Analyte	10.0	4.22	8808.34	8621.56	102.17
39	<b>ST181106G1-3 PFC CS3 537 18J1836</b>	181106G1_39	Analyte	10.0	4.22	8808.34	8621.56	102.17
40	1803458-01 SWEF1810251255KME 0.25378	181106G1_40	Analyte	10.0	4.22	9584.52	8621.56	111.17
41	IPA	181106G1_41	Analyte	10.0			8621.56	0.00
42	ST181106G1-4 PFC CS-1 537 18J1832	181106G1_42	Analyte	10.0	4.22	9275.02	8621.56	107.58

### Compound 19: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	CCAL Area	% Area	
1	IPA	181106G1_1	Analyte	28.7		13568.34	0.00	
2	<b>ST181106G1-1 PFC CS-1 537 18J1832</b>	181106G1_2	Analyte	28.7	4.63	13568.34	13568.34	100.00
3	B8K0002-BS1 LFB 0.25	181106G1_3	Analyte	28.7	4.65	15881.60	13568.34	117.05
4	B8K0002-BSD1 LFB 0.25	181106G1_4	Analyte	28.7	4.65	13656.84	13568.34	100.65
5	B8K0002-BLK1 LRB 0.25	181106G1_5	Analyte	28.7	4.65	15360.25	13568.34	113.21
6	1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	181106G1_6	Analyte	28.7	4.65	15175.78	13568.34	111.85
7	1803480-02 WI-CV-1RW90-MID02-103018 0.24449	181106G1_7	Analyte	28.7	4.65	15005.10	13568.34	110.59
8	1803480-03 WI-CV-1RW90-MID01-103018 0.24119	181106G1_8	Analyte	28.7	4.65	15003.36	13568.34	110.58
9	1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	181106G1_9	Analyte	28.7	4.65	14150.55	13568.34	104.29
10	1803480-05 WI-CV-1RW90-INF01-103018 0.24639	181106G1_10	Analyte	28.7	4.65	14848.44	13568.34	109.43
11	1803480-06 WI-CV-1FB90-103018 0.24089	181106G1_11	Analyte	28.7	4.64	14865.92	13568.34	109.56
12	1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	181106G1_12	Analyte	28.7	4.65	16038.06	13568.34	118.20
13	1803480-08 WI-CV-1RW90-MID202-103018 0.24794	181106G1_13	Analyte	28.7	4.65	13664.81	13568.34	100.71

14	1803480-09 WI-CV-1RW90-MID201-103018 0.23283	181106G1_14	Analyte	28.7	4.66	14537.10	13568.34	107.14
15	1803480-10 WI-CV-1RW90-INF201-103018 0.24673	181106G1_15	Analyte	28.7	4.65	13829.34	13568.34	101.92
16	IPA	181106G1_16	Analyte	28.7			13568.34	0.00
17	ST181106G1-2 PFC CS1 537 18J1834	181106G1_17	Analyte	28.7	4.65	13481.00	13568.34	99.36
17	<b>ST181106G1-2 PFC CS1 537 18J1834</b>	181106G1_17	Analyte	28.7	4.65	13481.00	13481.00	100.00
18	B8K0017-BS1 LFB 0.25	181106G1_18	Analyte	28.7	4.65	13603.83	13481.00	100.91
19	B8K0017-BLK1 LRB 0.25	181106G1_19	Analyte	28.7	4.65	15175.57	13481.00	112.57
20	B8K0017-MS1 LFSM 0.25099	181106G1_20	Analyte	28.7	4.65	14784.24	13481.00	109.67
21	B8K0017-MSD1 LFSMD 0.25066	181106G1_21	Analyte	28.7	4.65	15776.73	13481.00	117.03
22	1803499-01 CH-AT-1RW202-1118 0.25415	181106G1_22	Analyte	28.7	4.65	13950.72	13481.00	103.48
23	1803499-02 CH-AT-1FB202-1118 0.25611	181106G1_23	Analyte	28.7	4.65	13736.66	13481.00	101.90
24	B8K0010-BS1 LFB 0.25	181106G1_24	Analyte	28.7	4.65	15650.59	13481.00	116.09
25	B8K0010-BSD1 LFBD 0.25	181106G1_25	Analyte	28.7	4.66	13177.19	13481.00	97.75
26	B8K0010-BLK1 LRB 0.25	181106G1_26	Analyte	28.7	4.65	14661.11	13481.00	108.75
27	1803399-01RE1 GWNT1810191000MK 0.27114	181106G1_27	Analyte	28.7	4.65	13780.32	13481.00	102.22
28	B8J0237-BS1 LFB 0.25	181106G1_28	Analyte	28.7	4.65	14486.82	13481.00	107.46
29	B8J0237-BSD1 LFBD 0.25	181106G1_29	Analyte	28.7	4.65	15401.76	13481.00	114.25
30	B8J0237-BLK1 LRB 0.25	181106G1_30	Analyte	28.7	4.65	16106.12	13481.00	119.47
31	1803444-01 SWEF1810230955KME 0.25579	181106G1_31	Analyte	28.7	4.65	15363.50	13481.00	113.96
32	1803446-01 SWEF1810231040KME 0.2539	181106G1_32	Analyte	28.7	4.65	14833.73	13481.00	110.03
33	1803448-01 SWEF1810241320KME 0.24657	181106G1_33	Analyte	28.7	4.65	14726.53	13481.00	109.24
34	1803450-01 SWEF1810250910KME 0.25109	181106G1_34	Analyte	28.7	4.65	14847.85	13481.00	110.14
35	1803452-01 SWEF1810251045KME 0.24905	181106G1_35	Analyte	28.7	4.65	13820.56	13481.00	102.52
36	1803454-01 SWEF1810251125KME 0.25124	181106G1_36	Analyte	28.7	4.65	14288.86	13481.00	105.99
37	1803456-01 SWEF1810251215KME 0.24968	181106G1_37	Analyte	28.7	4.65	15416.04	13481.00	114.35
38	IPA	181106G1_38	Analyte	28.7			13481.00	0.00
39	ST181106G1-3 PFC CS3 537 18J1836	181106G1_39	Analyte	28.7	4.64	11946.39	13481.00	88.62
39	<b>ST181106G1-3 PFC CS3 537 18J1836</b>	181106G1_39	Analyte	28.7	4.64	11946.39	11946.39	100.00
40	1803458-01 SWEF1810251255KME 0.25378	181106G1_40	Analyte	28.7	4.65	13808.53	11946.39	115.59
41	IPA	181106G1_41	Analyte	28.7			11946.39	0.00
42	ST181106G1-4 PFC CS-1 537 18J1832	181106G1_42	Analyte	28.7	4.65	12853.73	11946.39	107.60



**Compound 20: d3-N-MeFOSAA**

ID	Name	Type	Std. Conc	RT	Area	CCAL Area	% Area	
1	IPA	181106G1_1	Analyte	40		18667.07	0.00	
2	<b>ST181106G1-1 PFC CS-1 537 18J1832</b>	181106G1_2	Analyte	40	5.05	18667.07	18667.07	100.00
3	B8K0002-BS1 LFB 0.25	181106G1_3	Analyte	40	5.04	23853.71	18667.07	127.78
4	B8K0002-BSD1 LFB 0.25	181106G1_4	Analyte	40	5.03	23395.77	18667.07	125.33
5	B8K0002-BLK1 LRB 0.25	181106G1_5	Analyte	40	5.03	23581	18667.07	126.32
6	1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	181106G1_6	Analyte	40	5.02	22681.46	18667.07	121.51
7	1803480-02 WI-CV-1RW90-MID02-103018 0.24449	181106G1_7	Analyte	40	5.03	24944.62	18667.07	133.63
8	1803480-03 WI-CV-1RW90-MID01-103018 0.24119	181106G1_8	Analyte	40	5.03	22419.33	18667.07	120.10
9	1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	181106G1_9	Analyte	40	5.02	24658.07	18667.07	132.09
10	1803480-05 WI-CV-1RW90-INF01-103018 0.24639	181106G1_10	Analyte	40	5.02	24271.18	18667.07	130.02
11	1803480-06 WI-CV-1FB90-103018 0.24089	181106G1_11	Analyte	40	5.01	24771.99	18667.07	132.70
12	1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	181106G1_12	Analyte	40	5.01	25824.12	18667.07	138.34
13	1803480-08 WI-CV-1RW90-MID202-103018 0.24794	181106G1_13	Analyte	40	5.01	22350.13	18667.07	119.73
14	1803480-09 WI-CV-1RW90-MID201-103018 0.23283	181106G1_14	Analyte	40	5.01	23363.39	18667.07	125.16
15	1803480-10 WI-CV-1RW90-INF201-103018 0.24673	181106G1_15	Analyte	40	5.01	21364.45	18667.07	114.45
16	IPA	181106G1_16	Analyte	40			18667.07	0.00
17	ST181106G1-2 PFC CS1 537 18J1834	181106G1_17	Analyte	40	5	21519.68	18667.07	115.28
17	<b>ST181106G1-2 PFC CS1 537 18J1834</b>	181106G1_17	Analyte	40	5	21519.68	21519.68	100.00
18	B8K0017-BS1 LFB 0.25	181106G1_18	Analyte	40	5	20816.73	21519.68	96.73
19	B8K0017-BLK1 LRB 0.25	181106G1_19	Analyte	40	5	21575.55	21519.68	100.26
20	B8K0017-MS1 LFSM 0.25099	181106G1_20	Analyte	40	5.01	22386.13	21519.68	104.03
21	B8K0017-MSD1 LFSMD 0.25066	181106G1_21	Analyte	40	5	23221.24	21519.68	107.91
22	1803499-01 CH-AT-1RW202-1118 0.25415	181106G1_22	Analyte	40	4.99	23847.22	21519.68	110.82
23	1803499-02 CH-AT-1FB202-1118 0.25611	181106G1_23	Analyte	40	4.99	22835.28	21519.68	106.11
24	B8K0010-BS1 LFB 0.25	181106G1_24	Analyte	40	5	23922.61	21519.68	111.17
25	B8K0010-BSD1 LFB 0.25	181106G1_25	Analyte	40	5	22219.95	21519.68	103.25
26	B8K0010-BLK1 LRB 0.25	181106G1_26	Analyte	40	5	23505.63	21519.68	109.23
27	1803399-01RE1 GWNT1810191000MK 0.27114	181106G1_27	Analyte	40	5	22393.13	21519.68	104.06
28	B8J0237-BS1 LFB 0.25	181106G1_28	Analyte	40	5	22204.18	21519.68	103.18
29	B8J0237-BSD1 LFB 0.25	181106G1_29	Analyte	40	5	23908.17	21519.68	111.10

30	B8J0237-BLK1 LRB 0.25	181106G1_30	Analyte	40	5	25870.06	21519.68	120.22
31	1803444-01 SWEF1810230955KME 0.25579	181106G1_31	Analyte	40	5	22378.75	21519.68	103.99
32	1803446-01 SWEF1810231040KME 0.2539	181106G1_32	Analyte	40	5	23708.97	21519.68	110.17
33	1803448-01 SWEF1810241320KME 0.24657	181106G1_33	Analyte	40	5	23601.65	21519.68	109.67
34	1803450-01 SWEF1810250910KME 0.25109	181106G1_34	Analyte	40	5	22947.91	21519.68	106.64
35	1803452-01 SWEF1810251045KME 0.24905	181106G1_35	Analyte	40	5	22086.79	21519.68	102.64
36	1803454-01 SWEF1810251125KME 0.25124	181106G1_36	Analyte	40	5	22881.75	21519.68	106.33
37	1803456-01 SWEF1810251215KME 0.24968	181106G1_37	Analyte	40	5.01	21978.53	21519.68	102.13
38	IPA	181106G1_38	Analyte	40			21519.68	0.00
39	ST181106G1-3 PFC CS3 537 18J1836	181106G1_39	Analyte	40	5.01	22783.11	21519.68	105.87
39	<b>ST181106G1-3 PFC CS3 537 18J1836</b>	181106G1_39	Analyte	40	5.01	22783.11	22783.11	100.00
40	1803458-01 SWEF1810251255KME 0.25378	181106G1_40	Analyte	40	5	23097.73	22783.11	101.38
41	IPA	181106G1_41	Analyte	40			22783.11	0.00
42	ST181106G1-4 PFC CS-1 537 18J1832	181106G1_42	Analyte	40	5.01	20848.59	22783.11	91.51

# LC Calibration Standards Review Checklist Q1

Calibration ID:	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
ST18110GG1-1 <span style="float: right;">LMH</span>	<del>N/A</del>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
↓ -2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
↓ -3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
↓ -4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
_____ LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

N/A

Full Mass Cal. Date: 9/25/18

Run Log Present:

# of Samples per Sequence Checked:

Instrument Blank Saved:  *N/A*

IIS Area Saved:

Reviewed By: AD 11/7/18  
Initials/Date

Comments:

DW-L14

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-02.qld

Last Altered: Tuesday, November 06, 2018 09:59:18 Pacific Standard Time

Printed: Tuesday, November 06, 2018 09:59:47 Pacific Standard Time

*VAD 11/7/18*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_2, Date: 06-Nov-2018, Time: 09:13:04, ID: ST181106G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	7.69e2	1.36e4	1.00		2.94	2.94	1.63	1.86	104.6
2	2 PFHxA	312.8 > 269.0	1.60e3	9.33e3	1.00		3.30	3.30	1.71	1.99	99.5
3	3 PFHpA	362.8 > 319.0	1.99e3	9.33e3	1.00		3.81	3.81	2.14	2.11	105.3
4	4 PFHxS	398.7 > 80.2	8.42e2	1.36e4	1.00		3.93	3.93	1.78	2.04	111.9
5	5 PFOA	412.7 > 368.9	2.24e3	9.33e3	1.00		4.22	4.22	2.40	2.18	108.9
6	6 PFNA	462.8 > 419.0	1.69e3	9.33e3	1.00		4.57	4.57	1.82	2.05	102.5
7	7 PFOS	498.7 > 80.2	3.21e2	1.36e4	1.00		4.64	4.64	0.680	1.82	98.0
8	8 PFDA	512.8 > 468.9	2.41e3	9.33e3	1.00		4.89	4.89	2.59	1.94	97.1
9	9 N-MeFOSAA	569.8 > 419.0	8.13e2	1.87e4	1.00		5.04	5.04	1.74	2.26	113.1
10	10 N-EtFOSAA	583.8 > 419.0	7.24e2	1.87e4	1.00		5.13	5.13	1.55	2.42	121.0
11	11 PFUnA	562.7 > 518.9	2.33e3	9.33e3	1.00		5.14	5.14	2.50	1.90	94.8
12	12 PFDaA	612.8 > 569.0	2.44e3	9.33e3	1.00		5.34	5.34	2.62	1.96	98.2
13	13 PFTrDA	662.8 > 619.0	2.44e3	9.33e3	1.00		5.56	5.56	2.62	1.92	96.0
14	14 PFTeDA	712.8 > 669.0	2.48e3	9.33e3	1.00		5.75	5.75	2.65	2.04	102.0
15	15 13C2-PFHxA	314.9 > 270.0	7.72e3	9.33e3	1.00	0.897	3.29	3.30	8.27	9.23	92.3
16	16 13C2-PFDA	514.8 > 470.0	1.00e4	9.33e3	1.00	1.160	4.86	4.89	10.7	9.25	92.5
17	17 d5-N-EtFOSAA	588.8 > 419.0	1.82e4	1.87e4	1.00	0.872	5.18	5.13	39.0	44.7	111.8
18	18 13C2-PFOA	414.8 > 370.0	9.33e3	9.33e3	1.00	1.000	4.22	4.22	10.0	10.0	100.0
19	19 13C4-PFOS	502.8 > 80.2	1.36e4	1.36e4	1.00	1.000	4.63	4.63	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.0	1.87e4	1.87e4	1.00	1.000	5.05	5.05	40.0	40.0	100.0

*Calc 11/7/18*

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-IIS.qld

Last Altered: Wednesday, November 07, 2018 07:39:25 Pacific Standard Time

Printed: Wednesday, November 07, 2018 08:00:15 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Compound name: PFBS

	# Name	ID	Acq.Date	Acq.Time
1	1 181106G1_1	IPA	06-Nov-18	09:01:00
2	2 181106G1_2	ST181106G1-1 PFC CS-1 537 18J1832	06-Nov-18	09:13:04
3	3 181106G1_3	B8K0002-BS1 LFB 0.25	06-Nov-18	09:50:12
4	4 181106G1_4	B8K0002-BSD1 LFB 0.25	06-Nov-18	10:02:12
5	5 181106G1_5	B8K0002-BLK1 LRB 0.25	06-Nov-18	10:15:09
6	6 181106G1_6	1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	06-Nov-18	10:28:06
7	7 181106G1_7	1803480-02 WI-CV-1RW90-MID02-103018 0.24449	06-Nov-18	10:41:04
8	8 181106G1_8	1803480-03 WI-CV-1RW90-MID01-103018 0.24119	06-Nov-18	10:54:01
9	9 181106G1_9	1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	06-Nov-18	11:06:59
10	10 181106G1_10	1803480-05 WI-CV-1RW90-INF01-103018 0.24639	06-Nov-18	11:19:56
11	11 181106G1_11	1803480-06 WI-CV-1FB90-103018 0.24089	06-Nov-18	11:33:02
12	12 181106G1_12	1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	06-Nov-18	11:46:03
13	13 181106G1_13	1803480-08 WI-CV-1RW90-MID202-103018 0.24794	06-Nov-18	11:59:10
14	14 181106G1_14	1803480-09 WI-CV-1RW90-MID201-103018 0.23283	06-Nov-18	12:12:03
15	15 181106G1_15	1803480-10 WI-CV-1RW90-INF201-103018 0.24673	06-Nov-18	12:24:55
16	16 181106G1_16	IPA	06-Nov-18	12:37:53
17	17 181106G1_17	ST181106G1-2 PFC CS1 537 18J1834	06-Nov-18	12:50:54
18	18 181106G1_18	B8K0017-BS1 LFB 0.25	06-Nov-18	13:03:55
19	19 181106G1_19	B8K0017-BLK1 LRB 0.25	06-Nov-18	13:16:52
20	20 181106G1_20	B8K0017-MS1 LFSM 0.25099	06-Nov-18	13:29:49
21	21 181106G1_21	B8K0017-MSD1 LFSMD 0.25066	06-Nov-18	13:42:47
22	22 181106G1_22	1803499-01 CH-AT-1RW202-1118 0.25415	06-Nov-18	13:55:44
23	23 181106G1_23	1803499-02 CH-AT-1FB202-1118 0.25611	06-Nov-18	14:08:37
24	24 181106G1_24	B8K0010-BS1 LFB 0.25	06-Nov-18	14:21:35
25	25 181106G1_25	B8K0010-BSD1 LFB 0.25	06-Nov-18	14:34:35
26	26 181106G1_26	B8K0010-BLK1 LRB 0.25	06-Nov-18	14:47:32
27	27 181106G1_27	1803399-01RE1 GWNT1810191000MK 0.27114	06-Nov-18	15:00:31
28	28 181106G1_28	B8J0237-BS1 LFB 0.25	06-Nov-18	15:13:23
29	29 181106G1_29	B8J0237-BSD1 LFB 0.25	06-Nov-18	15:26:20
30	30 181106G1_30	B8J0237-BLK1 LRB 0.25	06-Nov-18	15:39:17
31	31 181106G1_31	1803444-01 SWEF1810230955KME 0.25579	06-Nov-18	15:52:15
32	32 181106G1_32	1803446-01 SWEF1810231040KME 0.2539	06-Nov-18	16:05:13

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-IIS.qld

Last Altered: Wednesday, November 07, 2018 07:39:25 Pacific Standard Time

Printed: Wednesday, November 07, 2018 08:00:15 Pacific Standard Time

Compound name: PFBS

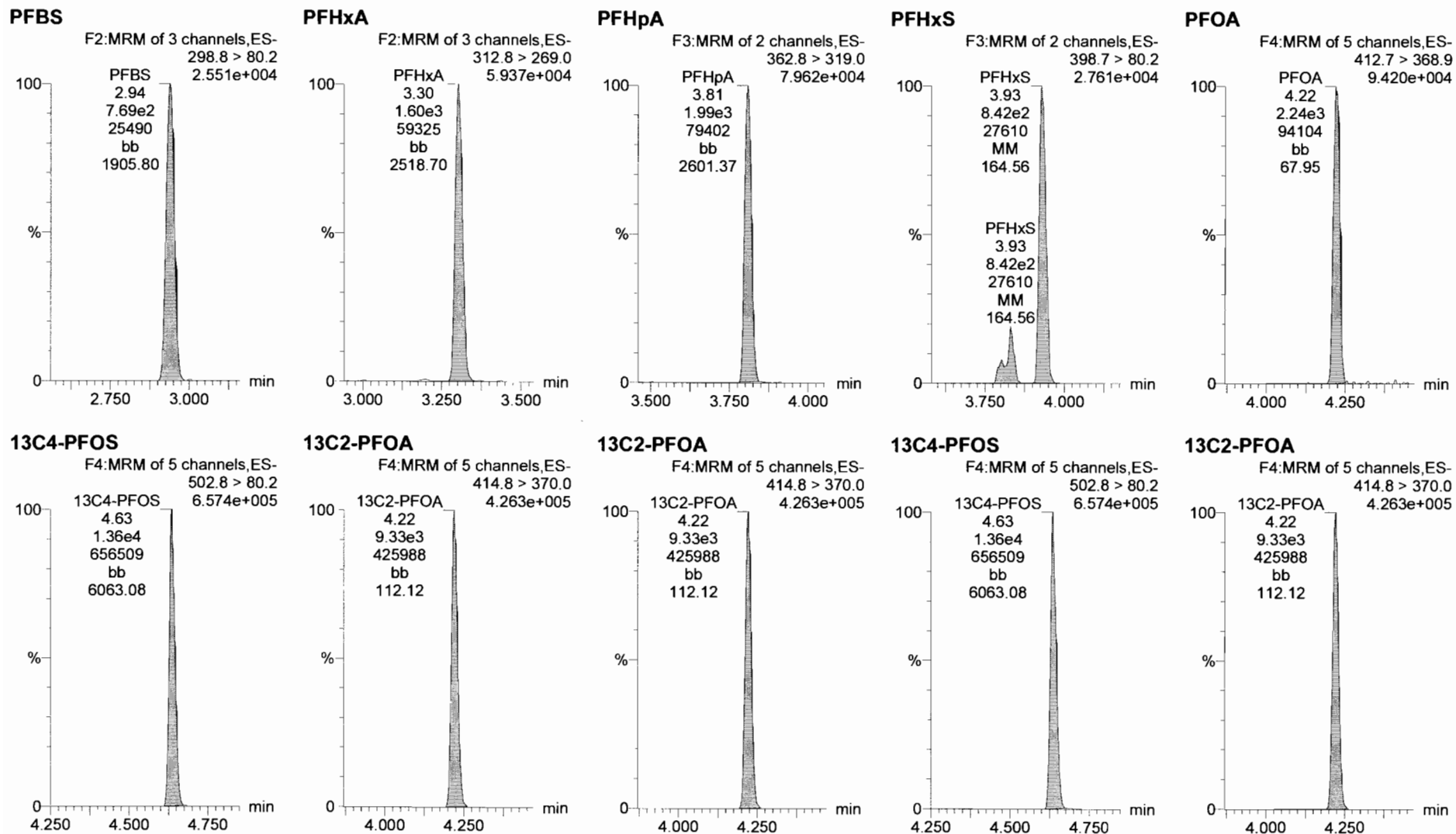
	# Name	ID	Acq.Date	Acq.Time
33	33 181106G1_33	1803448-01 SWEF1810241320KME 0.24657	06-Nov-18	16:18:11
34	34 181106G1_34	1803450-01 SWEF1810250910KME 0.25109	06-Nov-18	16:31:08
35	35 181106G1_35	1803452-01 SWEF1810251045KME 0.24905	06-Nov-18	16:44:06
36	36 181106G1_36	1803454-01 SWEF1810251125KME 0.25124	06-Nov-18	16:56:59
37	37 181106G1_37	1803456-01 SWEF1810251215KME 0.24968	06-Nov-18	17:10:01
38	38 181106G1_38	IPA	06-Nov-18	17:22:55
39	39 181106G1_39	ST181106G1-3 PFC CS3 537 18J1836	06-Nov-18	17:35:55
40	40 181106G1_40	1803458-01 SWEF1810251255KME 0.25378	06-Nov-18	17:48:51
41	41 181106G1_41	IPA	06-Nov-18	18:01:47
42	42 181106G1_42	ST181106G1-4 PFC CS-1 537 18J1832	06-Nov-18	18:14:46

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-02.qld

Last Altered: Tuesday, November 06, 2018 09:59:18 Pacific Standard Time  
Printed: Tuesday, November 06, 2018 09:59:47 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16  
Calibration: X:\G1.pro\CurveDB\IC18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

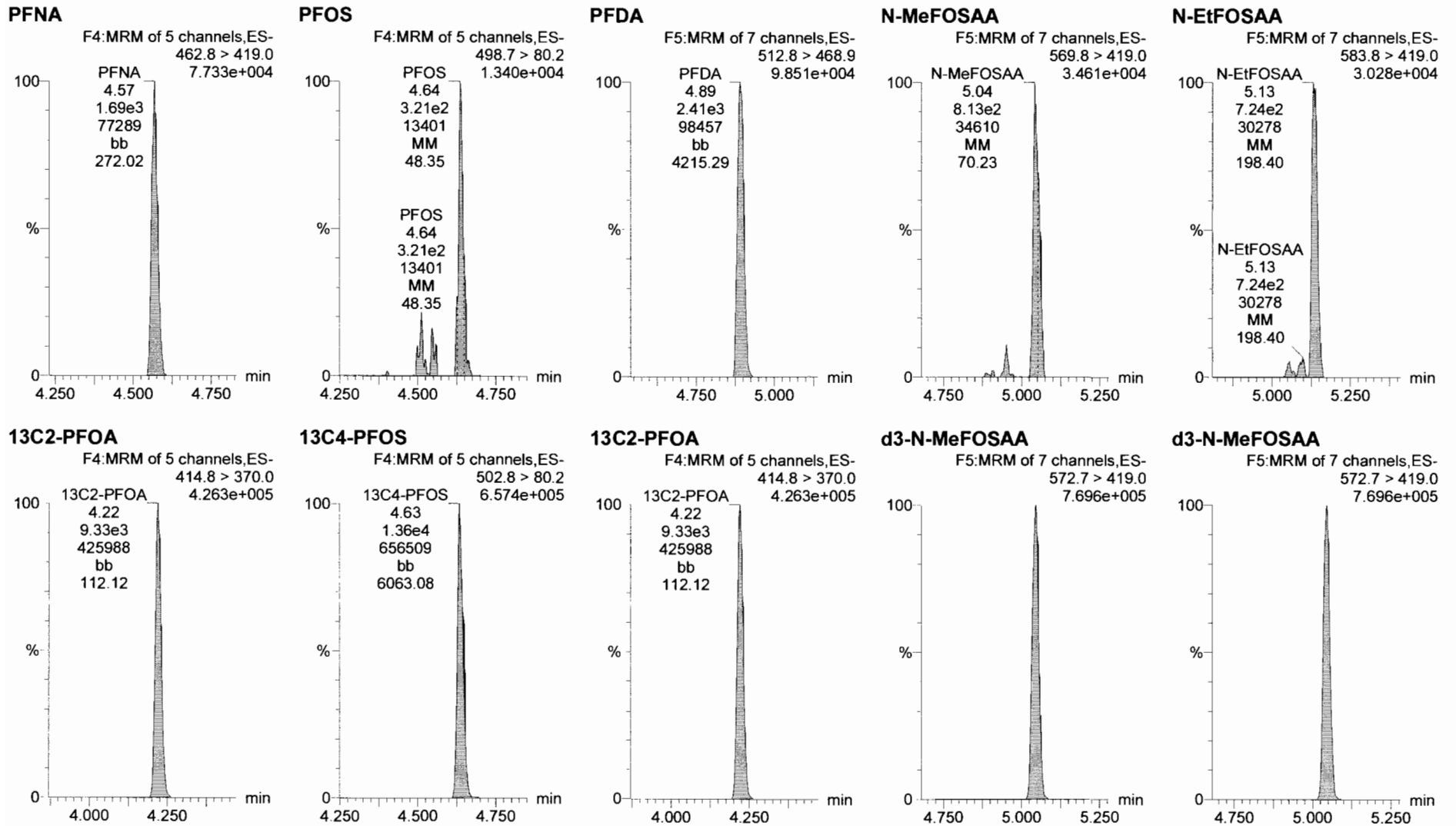
Name: 181106G1\_2, Date: 06-Nov-2018, Time: 09:13:04, ID: ST181106G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-02.qld

Last Altered: Tuesday, November 06, 2018 09:59:18 Pacific Standard Time  
Printed: Tuesday, November 06, 2018 09:59:47 Pacific Standard Time

Name: 181106G1\_2, Date: 06-Nov-2018, Time: 09:13:04, ID: ST181106G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832



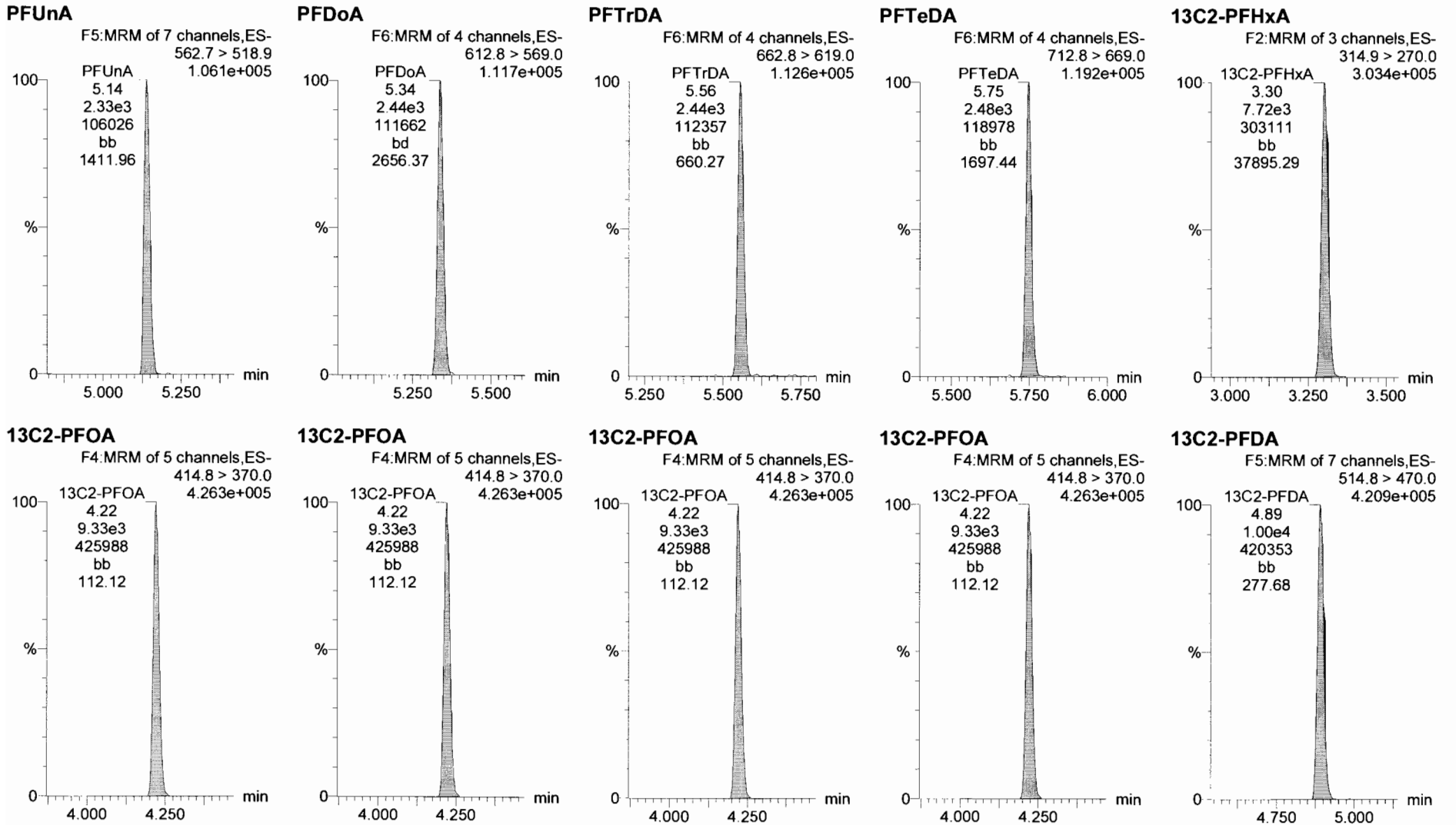


Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-02.qld

Last Altered: Tuesday, November 06, 2018 09:59:18 Pacific Standard Time

Printed: Tuesday, November 06, 2018 09:59:47 Pacific Standard Time

Name: 181106G1\_2, Date: 06-Nov-2018, Time: 09:13:04, ID: ST181106G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832



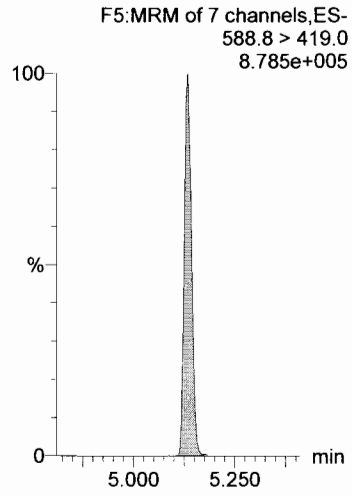
Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-02.qld

Last Altered: Tuesday, November 06, 2018 09:59:18 Pacific Standard Time

Printed: Tuesday, November 06, 2018 09:59:47 Pacific Standard Time

Name: 181106G1\_2, Date: 06-Nov-2018, Time: 09:13:04, ID: ST181106G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-17.qld

Last Altered: Tuesday, November 06, 2018 13:13:02 Pacific Standard Time

Printed: Tuesday, November 06, 2018 13:13:32 Pacific Standard Time

*✓AD 11/7/18*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_17, Date: 06-Nov-2018, Time: 12:50:54, ID: ST181106G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	3.42e3	1.35e4	1.00		2.96	2.94	7.29	8.35	94.5
2	2 PFHxA	312.8 > 269.0	7.09e3	9.69e3	1.00		3.30	3.30	7.32	8.51	85.1
3	3 PFHpA	362.8 > 319.0	8.63e3	9.69e3	1.00		3.81	3.81	8.90	8.78	87.8
4	4 PFHxS	398.7 > 80.2	3.68e3	1.35e4	1.00		3.95	3.93	7.84	8.96	98.3
5	5 PFOA	412.7 > 368.9	8.95e3	9.69e3	1.00		4.22	4.22	9.23	8.38	83.8
6	6 PFNA	462.8 > 419.0	7.62e3	9.69e3	1.00		4.57	4.58	7.87	8.88	88.8
7	7 PFOS	498.7 > 80.2	1.37e3	1.35e4	1.00		4.65	4.65	2.92	7.84	84.8
8	8 PFDA	512.8 > 468.9	1.14e4	9.69e3	1.00		4.89	4.88	11.7	8.80	88.0
9	9 N-MeFOSAA	569.8 > 419.0	3.70e3	2.15e4	1.00		5.00	5.01	6.87	8.92	89.2
10	10 N-EtFOSAA	583.8 > 419.0	2.87e3	2.15e4	1.00		5.09	5.12	5.33	8.33	83.3
11	11 PFUnA	562.7 > 518.9	1.10e4	9.69e3	1.00		5.14	5.13	11.3	8.61	86.1
12	12 PFDoA	612.8 > 569.0	1.02e4	9.69e3	1.00		5.34	5.36	10.6	7.93	79.3
13	13 PFTrDA	662.8 > 619.0	1.10e4	9.69e3	1.00		5.55	5.57	11.4	8.34	83.4
14	14 PFTeDA	712.8 > 669.0	1.11e4	9.69e3	1.00		5.75	5.75	11.5	8.82	88.2
15	15 13C2-PFHxA	314.9 > 270.0	7.56e3	9.69e3	1.00	0.897	3.29	3.30	7.80	8.70	87.0
16	16 13C2-PFDA	514.8 > 470.0	9.56e3	9.69e3	1.00	1.160	4.85	4.88	9.87	8.51	85.1
17	17 d5-N-EtFOSAA	588.8 > 419.0	1.71e4	2.15e4	1.00	0.872	5.13	5.12	31.7	36.4	91.0
18	18 13C2-PFOA	414.8 > 370.0	9.69e3	9.69e3	1.00	1.000	4.22	4.22	10.0	10.0	100.0
19	19 13C4-PFOS	502.8 > 80.2	1.35e4	1.35e4	1.00	1.000	4.63	4.65	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.0	2.15e4	2.15e4	1.00	1.000	5.05	5.00	40.0	40.0	100.0

*Call 11/7/18*

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-IIS.qld

Last Altered: Wednesday, November 07, 2018 07:39:25 Pacific Standard Time

Printed: Wednesday, November 07, 2018 08:00:15 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Compound name: PFBS

#	Name	ID	Acq.Date	Acq.Time
1	1 181106G1_1	IPA	06-Nov-18	09:01:00
2	2 181106G1_2	ST181106G1-1 PFC CS-1 537 18J1832	06-Nov-18	09:13:04
3	3 181106G1_3	B8K0002-BS1 LFB 0.25	06-Nov-18	09:50:12
4	4 181106G1_4	B8K0002-BSD1 LFBD 0.25	06-Nov-18	10:02:12
5	5 181106G1_5	B8K0002-BLK1 LRB 0.25	06-Nov-18	10:15:09
6	6 181106G1_6	1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	06-Nov-18	10:28:06
7	7 181106G1_7	1803480-02 WI-CV-1RW90-MID02-103018 0.24449	06-Nov-18	10:41:04
8	8 181106G1_8	1803480-03 WI-CV-1RW90-MID01-103018 0.24119	06-Nov-18	10:54:01
9	9 181106G1_9	1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	06-Nov-18	11:06:59
10	10 181106G1_10	1803480-05 WI-CV-1RW90-INF01-103018 0.24639	06-Nov-18	11:19:56
11	11 181106G1_11	1803480-06 WI-CV-1FB90-103018 0.24089	06-Nov-18	11:33:02
12	12 181106G1_12	1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	06-Nov-18	11:46:03
13	13 181106G1_13	1803480-08 WI-CV-1RW90-MID202-103018 0.24794	06-Nov-18	11:59:10
14	14 181106G1_14	1803480-09 WI-CV-1RW90-MID201-103018 0.23283	06-Nov-18	12:12:03
15	15 181106G1_15	1803480-10 WI-CV-1RW90-INF201-103018 0.24673	06-Nov-18	12:24:55
16	16 181106G1_16	IPA	06-Nov-18	12:37:53
17	17 181106G1_17	ST181106G1-2 PFC CS1 537 18J1834	06-Nov-18	12:50:54
18	18 181106G1_18	B8K0017-BS1 LFB 0.25	06-Nov-18	13:03:55
19	19 181106G1_19	B8K0017-BLK1 LRB 0.25	06-Nov-18	13:16:52
20	20 181106G1_20	B8K0017-MS1 LFSM 0.25099	06-Nov-18	13:29:49
21	21 181106G1_21	B8K0017-MSD1 LFSMD 0.25066	06-Nov-18	13:42:47
22	22 181106G1_22	1803499-01 CH-AT-1RW202-1118 0.25415	06-Nov-18	13:55:44
23	23 181106G1_23	1803499-02 CH-AT-1FB202-1118 0.25611	06-Nov-18	14:08:37
24	24 181106G1_24	B8K0010-BS1 LFB 0.25	06-Nov-18	14:21:35
25	25 181106G1_25	B8K0010-BSD1 LFBD 0.25	06-Nov-18	14:34:35
26	26 181106G1_26	B8K0010-BLK1 LRB 0.25	06-Nov-18	14:47:32
27	27 181106G1_27	1803399-01RE1 GWNT1810191000MK 0.27114	06-Nov-18	15:00:31
28	28 181106G1_28	B8J0237-BS1 LFB 0.25	06-Nov-18	15:13:23
29	29 181106G1_29	B8J0237-BSD1 LFBD 0.25	06-Nov-18	15:26:20
30	30 181106G1_30	B8J0237-BLK1 LRB 0.25	06-Nov-18	15:39:17
31	31 181106G1_31	1803444-01 SWEF1810230955KME 0.25579	06-Nov-18	15:52:15
32	32 181106G1_32	1803446-01 SWEF1810231040KME 0.2539	06-Nov-18	16:05:13

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-IIS.qld

Last Altered: Wednesday, November 07, 2018 07:39:25 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 08:00:15 Pacific Standard Time

Compound name: PFBS

#	Name	ID	Acq.Date	Acq.Time
33	33 181106G1_33	1803448-01 SWEF1810241320KME 0.24657	06-Nov-18	16:18:11
34	34 181106G1_34	1803450-01 SWEF1810250910KME 0.25109	06-Nov-18	16:31:08
35	35 181106G1_35	1803452-01 SWEF1810251045KME 0.24905	06-Nov-18	16:44:06
36	36 181106G1_36	1803454-01 SWEF1810251125KME 0.25124	06-Nov-18	16:56:59
37	37 181106G1_37	1803456-01 SWEF1810251215KME 0.24968	06-Nov-18	17:10:01
38	38 181106G1_38	IPA	06-Nov-18	17:22:55
39	39 181106G1_39	ST181106G1-3 PFC CS3 537 18J1836	06-Nov-18	17:35:55
40	40 181106G1_40	1803458-01 SWEF1810251255KME 0.25378	06-Nov-18	17:48:51
41	41 181106G1_41	IPA	06-Nov-18	18:01:47
42	42 181106G1_42	ST181106G1-4 PFC CS-1 537 18J1832	06-Nov-18	18:14:46

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-17.qld

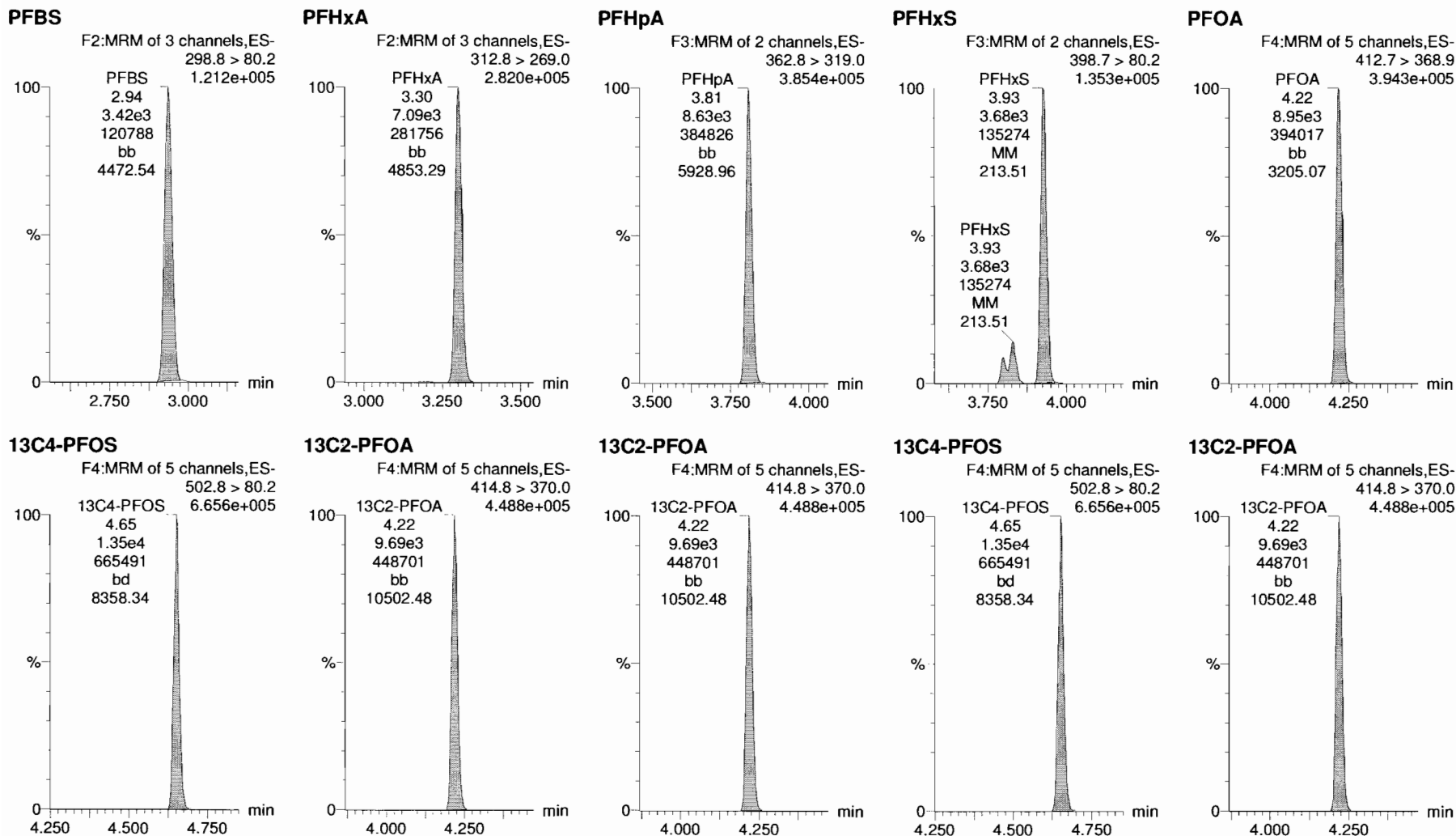
Last Altered: Tuesday, November 06, 2018 13:13:02 Pacific Standard Time

Printed: Tuesday, November 06, 2018 13:13:32 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_17, Date: 06-Nov-2018, Time: 12:50:54, ID: ST181106G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

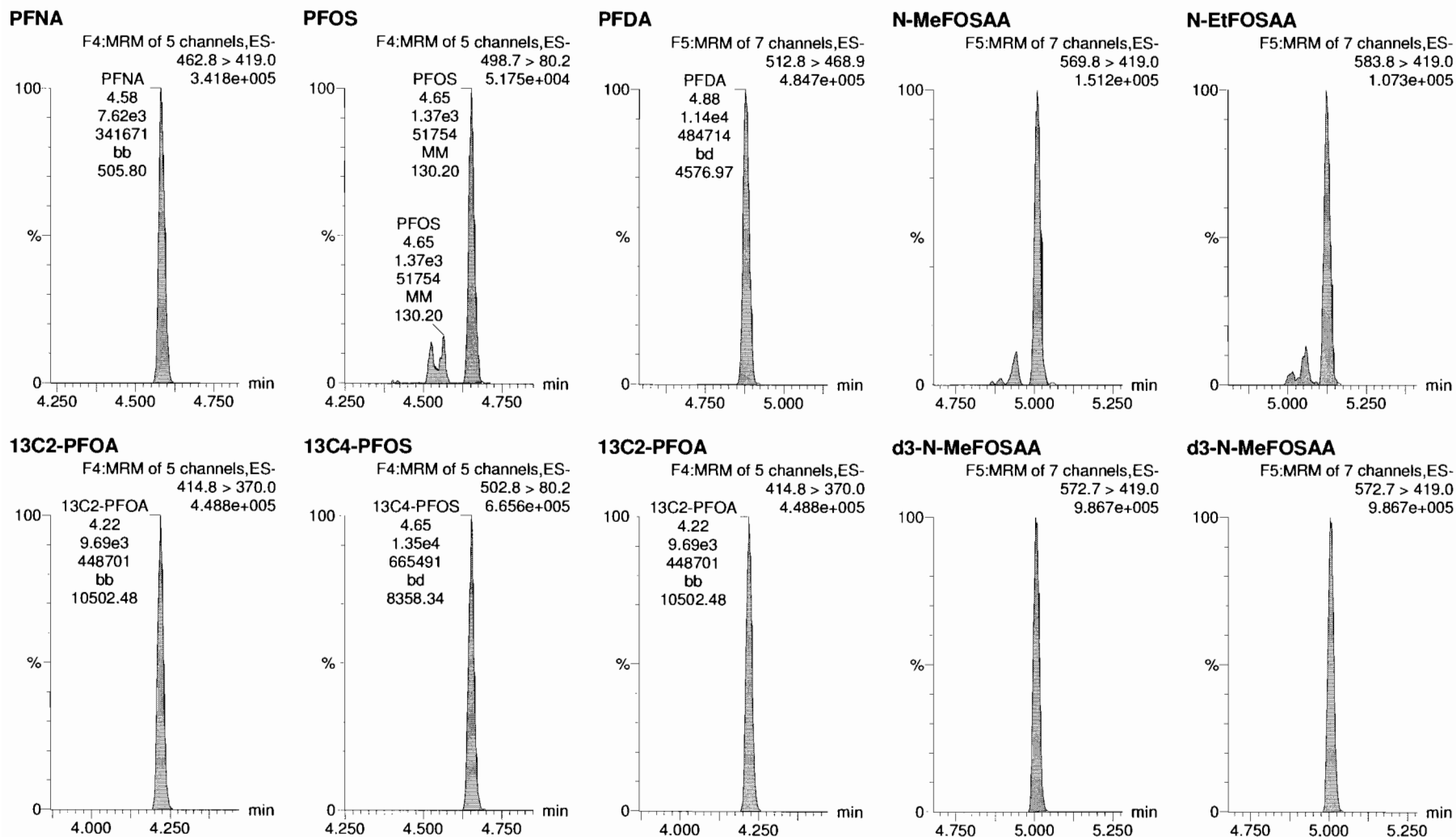


Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-17.qld

Last Altered: Tuesday, November 06, 2018 13:13:02 Pacific Standard Time

Printed: Tuesday, November 06, 2018 13:13:32 Pacific Standard Time

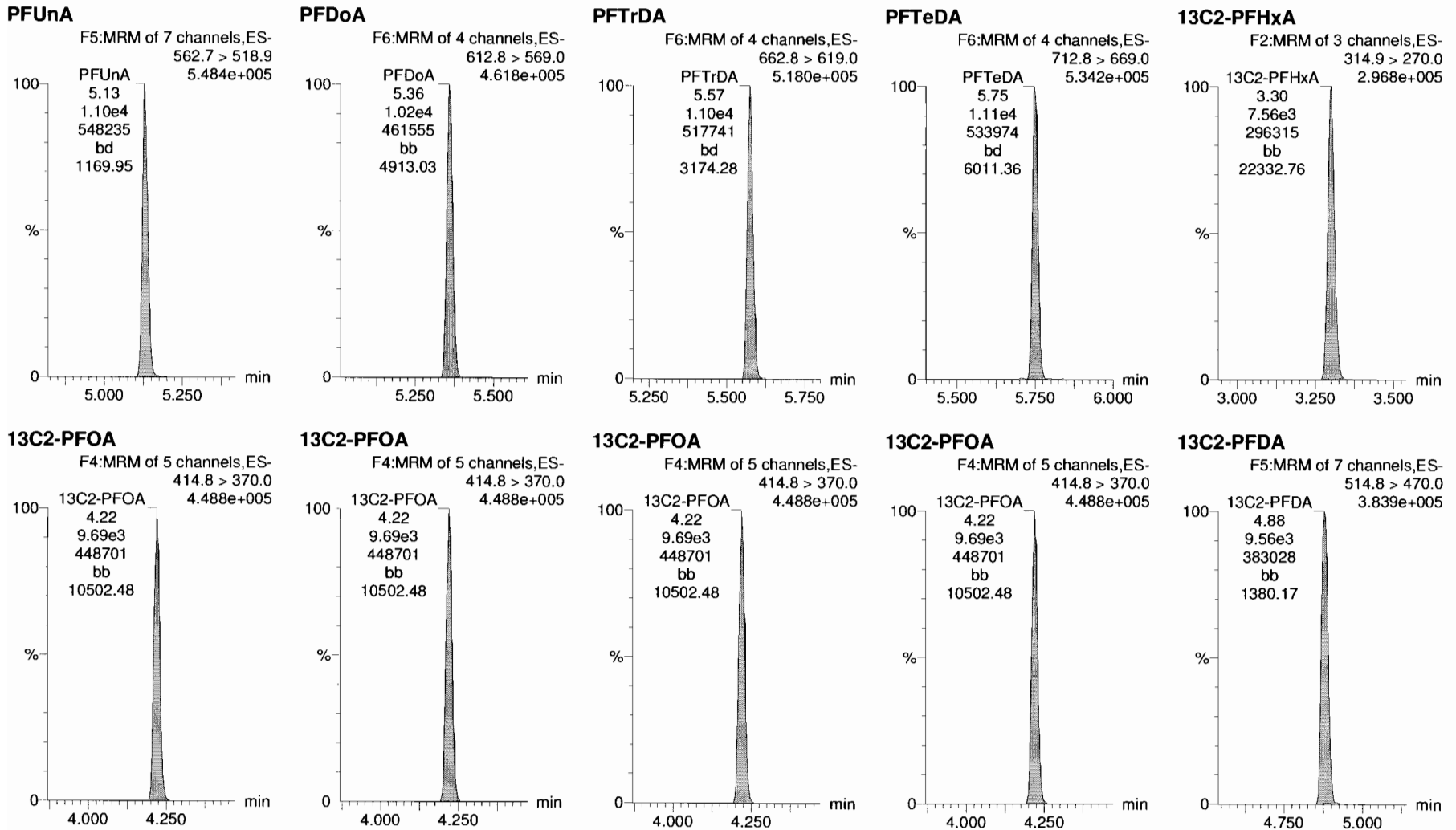
Name: 181106G1\_17, Date: 06-Nov-2018, Time: 12:50:54, ID: ST181106G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-17.qld

Last Altered: Tuesday, November 06, 2018 13:13:02 Pacific Standard Time  
Printed: Tuesday, November 06, 2018 13:13:32 Pacific Standard Time

Name: 181106G1\_17, Date: 06-Nov-2018, Time: 12:50:54, ID: ST181106G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834





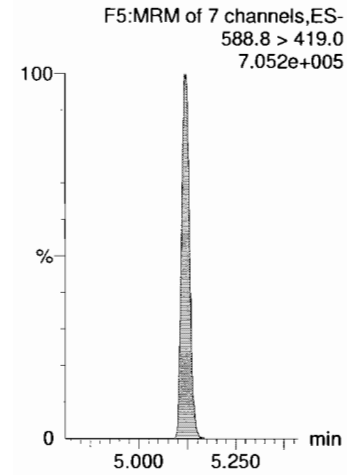
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Last Altered: Tuesday, November 06, 2018 13:13:02 Pacific Standard Time

Printed: Tuesday, November 06, 2018 13:13:32 Pacific Standard Time

Name: 181106G1\_17, Date: 06-Nov-2018, Time: 12:50:54, ID: ST181106G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

d5-N-EtFOSAA



Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-39.qld

Last Altered: Wednesday, November 07, 2018 07:55:37 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 07:59:03 Pacific Standard Time

*JAD 11/7/18*

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16  
Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181106G1\_39, Date: 06-Nov-2018, Time: 17:35:55, ID: ST181106G1-3 PFC CS3 537 18J1836, Description: PFC CS3 537 18J1836

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	1.66e4	1.19e4	1.00		2.95	2.94	39.9	45.6	103.3
2	2 PFHxA	312.8 > 269.0	3.53e4	8.81e3	1.00		3.30	3.30	40.0	46.6	93.2
3	3 PFHpA	362.8 > 319.0	4.50e4	8.81e3	1.00		3.81	3.81	51.1	50.4	100.8
4	4 PFHxS	398.7 > 80.2	1.81e4	1.19e4	1.00		3.94	3.93	43.5	49.7	109.3
5	5 PFOA	412.7 > 368.9	4.77e4	8.81e3	1.00		4.22	4.22	54.1	49.1	98.3
6	6 PFNA	462.8 > 419.0	3.88e4	8.81e3	1.00		4.57	4.58	44.1	49.8	99.6
7	7 PFOS	498.7 > 80.2	7.85e3	1.19e4	1.00		4.64	4.64	18.9	50.6	109.5
8	8 PFDA	512.8 > 468.9	5.50e4	8.81e3	1.00		4.89	4.88	62.4	46.9	93.7
9	9 N-MeFOSAA	569.8 > 419.0	1.98e4	2.28e4	1.00		5.00	5.01	34.8	45.2	90.3
10	10 N-EtFOSAA	583.8 > 419.0	1.66e4	2.28e4	1.00		5.09	5.12	29.1	45.4	90.9
11	11 PFUnA	562.7 > 518.9	5.24e4	8.81e3	1.00		5.14	5.12	59.5	45.2	90.3
12	12 PFDoA	612.8 > 569.0	5.35e4	8.81e3	1.00		5.34	5.36	60.8	45.7	91.3
13	13 PFTrDA	662.8 > 619.0	5.68e4	8.81e3	1.00		5.56	5.57	64.5	47.3	94.6
14	14 PFTeDA	712.8 > 669.0	5.45e4	8.81e3	1.00		5.75	5.74	61.8	47.5	95.1
15	15 13C2-PFHxA	314.9 > 270.0	7.85e3	8.81e3	1.00	0.897	3.29	3.30	8.92	9.94	99.4
16	16 13C2-PFDA	514.8 > 470.0	9.19e3	8.81e3	1.00	1.160	4.86	4.88	10.4	9.00	90.0
17	17 d5-N-EtFOSAA	588.8 > 419.0	1.69e4	2.28e4	1.00	0.872	5.14	5.11	29.7	34.1	85.2
18	18 13C2-PFOA	414.8 > 370.0	8.81e3	8.81e3	1.00	1.000	4.22	4.22	10.0	10.0	100.0
19	19 13C4-PFOS	502.8 > 80.2	1.19e4	1.19e4	1.00	1.000	4.63	4.64	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.0	2.28e4	2.28e4	1.00	1.000	5.05	5.01	40.0	40.0	100.0

*CAD 11/7/18*

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-IIS.qld

Last Altered: Wednesday, November 07, 2018 07:39:25 Pacific Standard Time  
 Printed: Wednesday, November 07, 2018 08:00:15 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16  
 Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Compound name: PFBS

#	Name	ID	Acq.Date	Acq.Time
1	1 181106G1_1	IPA	06-Nov-18	09:01:00
2	2 181106G1_2	ST181106G1-1 PFC CS-1 537 18J1832	06-Nov-18	09:13:04
3	3 181106G1_3	B8K0002-BS1 LFB 0.25	06-Nov-18	09:50:12
4	4 181106G1_4	B8K0002-BSD1 LFB 0.25	06-Nov-18	10:02:12
5	5 181106G1_5	B8K0002-BLK1 LRB 0.25	06-Nov-18	10:15:09
6	6 181106G1_6	1803480-01 WI-CV-1RW90-EFF01-103018 0.24446	06-Nov-18	10:28:06
7	7 181106G1_7	1803480-02 WI-CV-1RW90-MID02-103018 0.24449	06-Nov-18	10:41:04
8	8 181106G1_8	1803480-03 WI-CV-1RW90-MID01-103018 0.24119	06-Nov-18	10:54:01
9	9 181106G1_9	1803480-04 WI-CV-1RW90P-MID01-103018 0.23797	06-Nov-18	11:06:59
10	10 181106G1_10	1803480-05 WI-CV-1RW90-INF01-103018 0.24639	06-Nov-18	11:19:56
11	11 181106G1_11	1803480-06 WI-CV-1FB90-103018 0.24089	06-Nov-18	11:33:02
12	12 181106G1_12	1803480-07 WI-CV-1RW90-EFF201-103018 0.2486	06-Nov-18	11:46:03
13	13 181106G1_13	1803480-08 WI-CV-1RW90-MID202-103018 0.24794	06-Nov-18	11:59:10
14	14 181106G1_14	1803480-09 WI-CV-1RW90-MID201-103018 0.23283	06-Nov-18	12:12:03
15	15 181106G1_15	1803480-10 WI-CV-1RW90-INF201-103018 0.24673	06-Nov-18	12:24:55
16	16 181106G1_16	IPA	06-Nov-18	12:37:53
17	17 181106G1_17	ST181106G1-2 PFC CS1 537 18J1834	06-Nov-18	12:50:54
18	18 181106G1_18	B8K0017-BS1 LFB 0.25	06-Nov-18	13:03:55
19	19 181106G1_19	B8K0017-BLK1 LRB 0.25	06-Nov-18	13:16:52
20	20 181106G1_20	B8K0017-MS1 LFSM 0.25099	06-Nov-18	13:29:49
21	21 181106G1_21	B8K0017-MSD1 LFSMD 0.25066	06-Nov-18	13:42:47
22	22 181106G1_22	1803499-01 CH-AT-1RW202-1118 0.25415	06-Nov-18	13:55:44
23	23 181106G1_23	1803499-02 CH-AT-1FB202-1118 0.25611	06-Nov-18	14:08:37
24	24 181106G1_24	B8K0010-BS1 LFB 0.25	06-Nov-18	14:21:35
25	25 181106G1_25	B8K0010-BSD1 LFB 0.25	06-Nov-18	14:34:35
26	26 181106G1_26	B8K0010-BLK1 LRB 0.25	06-Nov-18	14:47:32
27	27 181106G1_27	1803399-01RE1 GWNT1810191000MK 0.27114	06-Nov-18	15:00:31
28	28 181106G1_28	B8J0237-BS1 LFB 0.25	06-Nov-18	15:13:23
29	29 181106G1_29	B8J0237-BSD1 LFB 0.25	06-Nov-18	15:26:20
30	30 181106G1_30	B8J0237-BLK1 LRB 0.25	06-Nov-18	15:39:17
31	31 181106G1_31	1803444-01 SWEF1810230955KME 0.25579	06-Nov-18	15:52:15
32	32 181106G1_32	1803446-01 SWEF1810231040KME 0.2539	06-Nov-18	16:05:13

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-IIS.qld

Last Altered: Wednesday, November 07, 2018 07:39:25 Pacific Standard Time

Printed: Wednesday, November 07, 2018 08:00:15 Pacific Standard Time

Compound name: PFBS

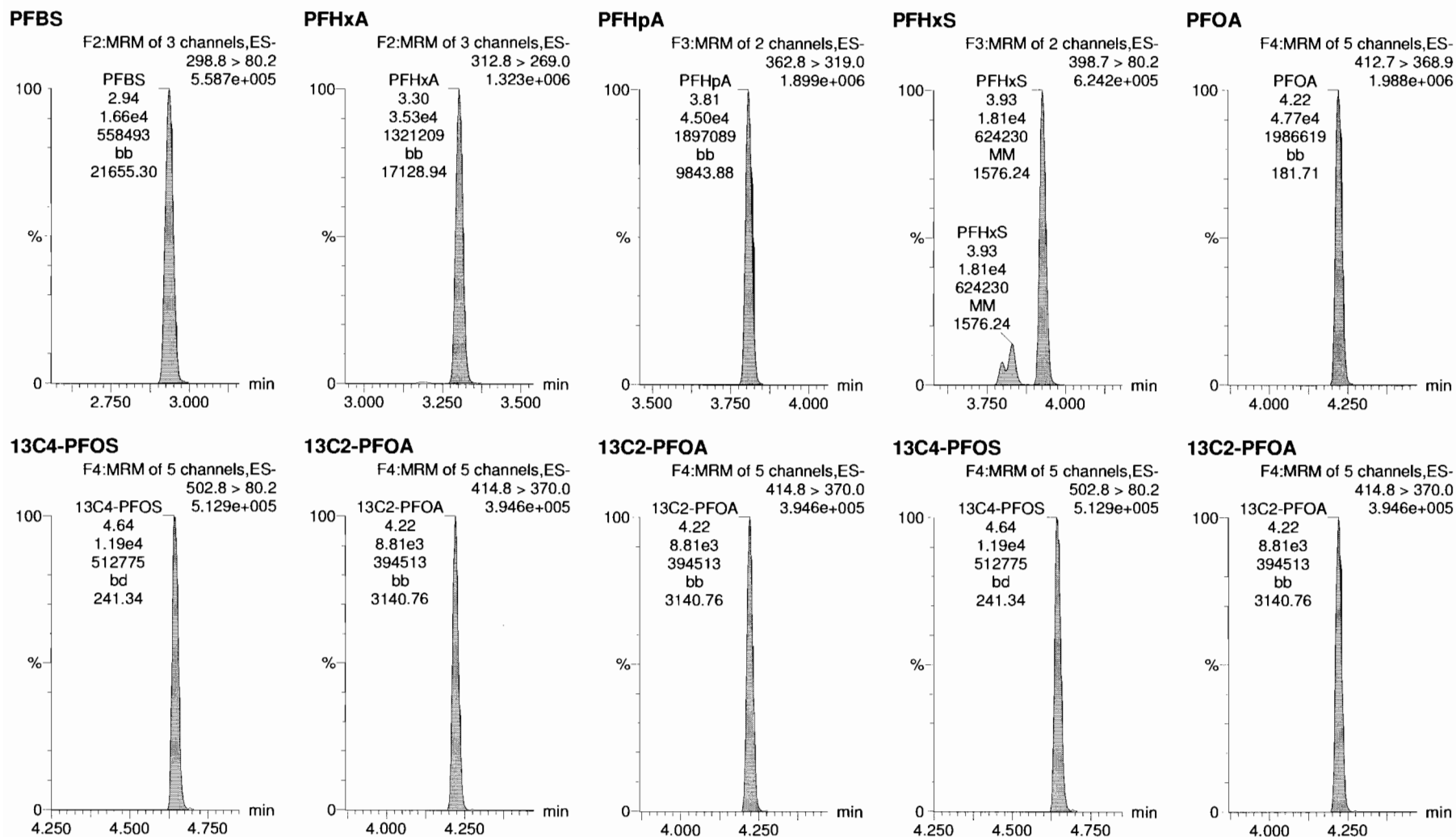
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33	33 181106G1_33	1803448-01 SWEF1810241320KME 0.24657	06-Nov-18	16:18:11
34	34 181106G1_34	1803450-01 SWEF1810250910KME 0.25109	06-Nov-18	16:31:08
35	35 181106G1_35	1803452-01 SWEF1810251045KME 0.24905	06-Nov-18	16:44:06
36	36 181106G1_36	1803454-01 SWEF1810251125KME 0.25124	06-Nov-18	16:56:59
37	37 181106G1_37	1803456-01 SWEF1810251215KME 0.24968	06-Nov-18	17:10:01
38	38 181106G1_38	IPA	06-Nov-18	17:22:55
39	39 181106G1_39	ST181106G1-3 PFC CS3 537 18J1836	06-Nov-18	17:35:55
40	40 181106G1_40	1803458-01 SWEF1810251255KME 0.25378	06-Nov-18	17:48:51
41	41 181106G1_41	IPA	06-Nov-18	18:01:47
42	42 181106G1_42	ST181106G1-4 PFC CS-1 537 18J1832	06-Nov-18	18:14:46

Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-39.qld

Last Altered: Wednesday, November 07, 2018 07:55:37 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 07:59:03 Pacific Standard Time

Method: X:\G1.pro\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16  
Calibration: X:\G1.pro\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

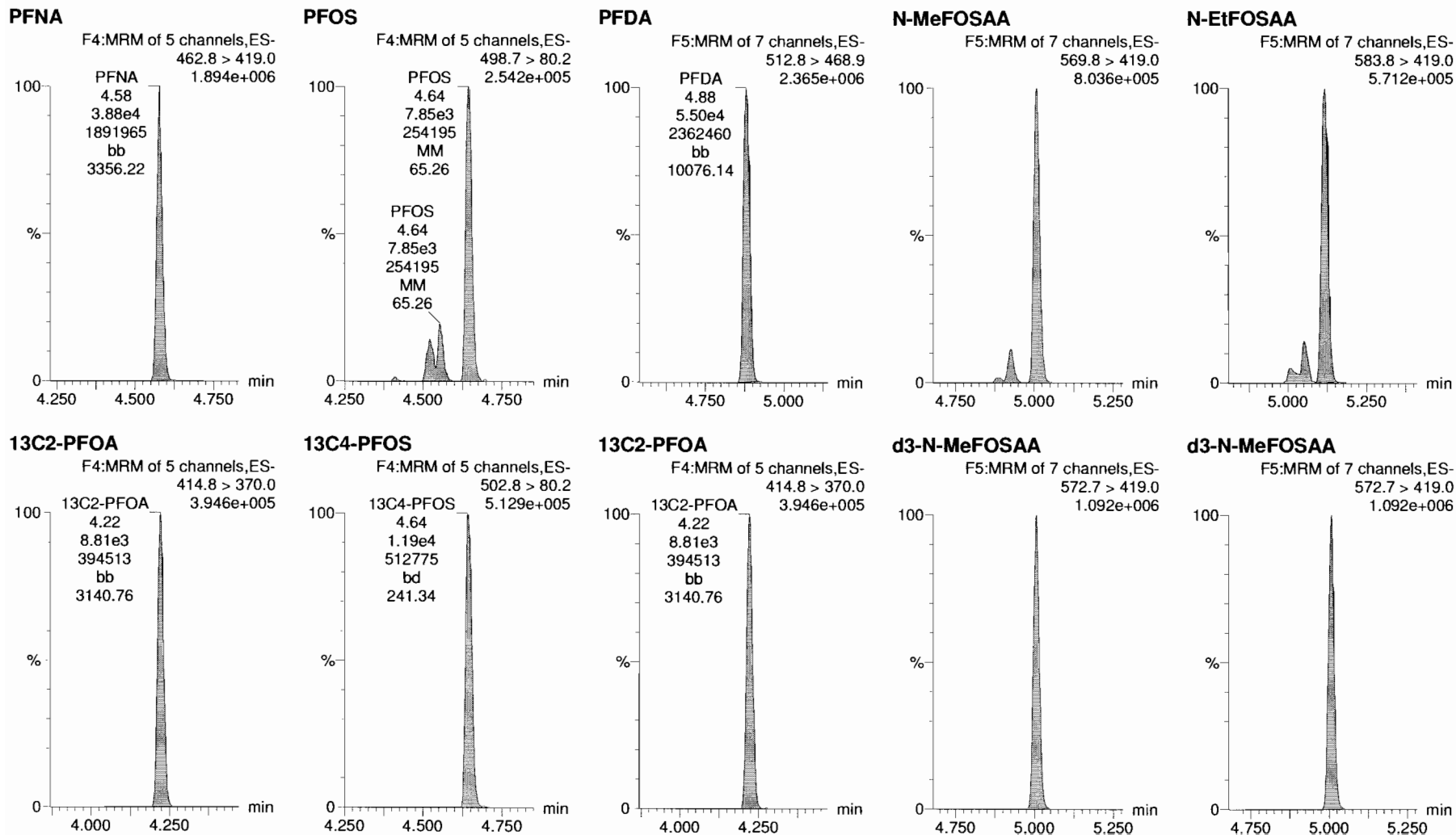
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Dataset: X:\G1.PRO\Results\2018\181106G1\181106G1-39.qld

Last Altered: Wednesday, November 07, 2018 07:55:37 Pacific Standard Time  
Printed: Wednesday, November 07, 2018 07:59:03 Pacific Standard Time

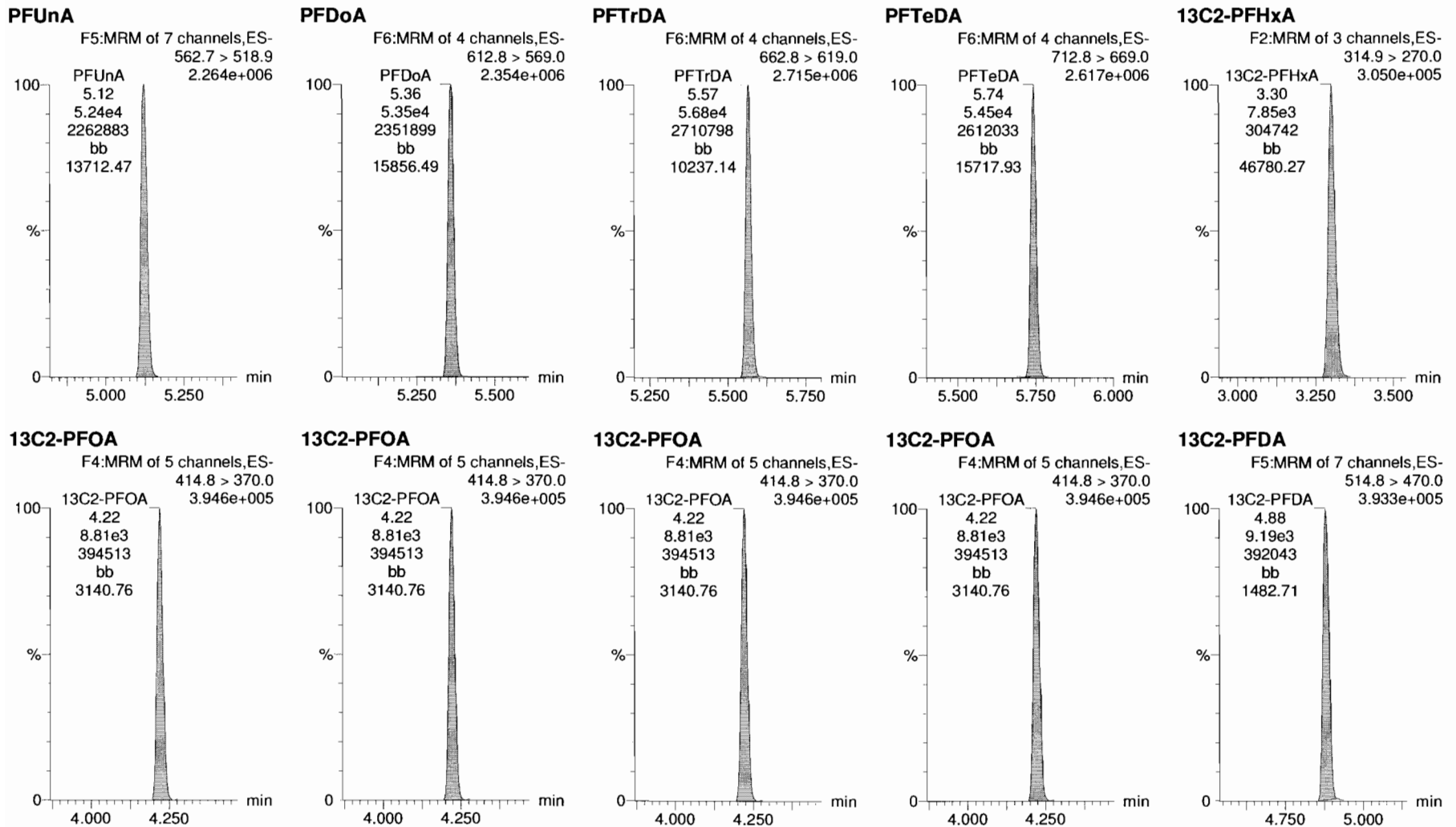
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Printed: Wednesday, November 07, 2018 07:59:03 Pacific Standard Time

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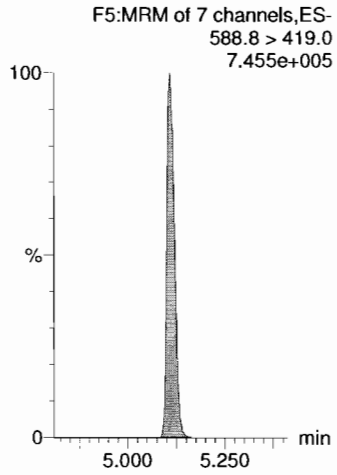


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Printed: Wednesday, November 07, 2018 07:59:03 Pacific Standard Time

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**d5-N-EtFOSAA**





# ICAL

## Compound 18: 13C2-PFOA

50-150%

ID	Name	Type	Std. Conc	RT	Area	ICAL Area	% Area
1 IPA	181107G1_1	Analyte	10			8621.56	0
2 ST181107G1-1 PFC CS-1 537 18J1832	181107G1_2	Analyte	10	4.22	8868.56	8621.56	102.86
3 1803499-01 CH-AT-1RW202-1118 0.25415	181107G1_3	Analyte	10	4.22	10751.34	8621.56	124.70
4 B8K0010-BSD1 LFBD 0.25	181107G1_4	Analyte	10	4.22	9537.06	8621.56	110.62
5 B8K0025-BS1 LFB 0.25	181107G1_5	Analyte	10	4.22	9240.56	8621.56	107.18
6 B8K0025-BLK1 LRB 0.25	181107G1_6	Analyte	10	4.22	9822.10	8621.56	113.92
7 B8K0025-MS1 LFSM 0.24737	181107G1_7	Analyte	10	4.22	9754.10	8621.56	113.14
8 B8K0025-MSD1 LFSMD 0.25331	181107G1_8	Analyte	10	4.21	9502.23	8621.56	110.21
9 1803485-01 SWEF1810241230GGA 0.22977	181107G1_9	Analyte	10	4.22	9567.15	8621.56	110.97
10 1803507-01 SWEF1810310935KME 0.24551	181107G1_10	Analyte	10	4.22	9593.90	8621.56	111.28
11 1803507-02 SWEF1810310950KME-FD 0.25911	181107G1_11	Analyte	10	4.22	9226.46	8621.56	107.02
12 1803507-03 FB1810310955KME 0.25909	181107G1_12	Analyte	10	4.22	9898.90	8621.56	114.82
13 1803509-01 SWEF1811011440KME 0.25362	181107G1_13	Analyte	10	4.22	8265.69	8621.56	95.87
14 1803511-01 SWEF1811011205KME 0.25412	181107G1_14	Analyte	10	4.22	9692.42	8621.56	112.42
15 IPA	181107G1_15	Analyte	10			8621.56	0.00
16 ST181107G1-2 PFC CS1 537 18J1834	181107G1_16	Analyte	10	4.22	9741.92	8621.56	112.99

## Compound 19: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	ICAL Area	% Area
1 IPA	181107G1_1	Analyte	28.7			12936.20	0
2 ST181107G1-1 PFC CS-1 537 18J1832	181107G1_2	Analyte	28.7	4.64	13090.80	12936.20	101.20
3 1803499-01 CH-AT-1RW202-1118 0.25415	181107G1_3	Analyte	28.7	4.64	16127.67	12936.20	124.67
4 B8K0010-BSD1 LFBD 0.25	181107G1_4	Analyte	28.7	4.64	15165.76	12936.20	117.23
5 B8K0025-BS1 LFB 0.25	181107G1_5	Analyte	28.7	4.64	13185.51	12936.20	101.93
6 B8K0025-BLK1 LRB 0.25	181107G1_6	Analyte	28.7	4.64	13015.68	12936.20	100.61
7 B8K0025-MS1 LFSM 0.24737	181107G1_7	Analyte	28.7	4.64	13783.71	12936.20	106.55
8 B8K0025-MSD1 LFSMD 0.25331	181107G1_8	Analyte	28.7	4.64	13208.38	12936.20	102.10
9 1803485-01 SWEF1810241230GGA 0.22977	181107G1_9	Analyte	28.7	4.64	14276.99	12936.20	110.36

10	1803507-01 SWEF1810310935KME 0.24551	181107G1_10	Analyte	28.7	4.64	13618.14	12936.20	105.27
11	1803507-02 SWEF1810310950KME-FD 0.25911	181107G1_11	Analyte	28.7	4.64	14196.60	12936.20	109.74
12	1803507-03 FB1810310955KME 0.25909	181107G1_12	Analyte	28.7	4.64	14845.44	12936.20	114.76
13	1803509-01 SWEF1811011440KME 0.25362	181107G1_13	Analyte	28.7	4.64	12345.63	12936.20	95.43
14	1803511-01 SWEF1811011205KME 0.25412	181107G1_14	Analyte	28.7	4.64	14049.78	12936.20	108.61
15	IPA	181107G1_15	Analyte	28.7			12936.20	0.00
16	ST181107G1-2 PFC CS1 537 18J1834	181107G1_16	Analyte	28.7	4.64	13307.65	12936.20	102.87

**Compound 20: d3-N-MeFOSAA**

ID	Name	Type	Std. Conc	RT	Area	ICAL Area	% Area	
1	IPA	181107G1_1	Analyte	40.0		18879.71	0	
2	ST181107G1-1 PFC CS-1 537 18J1832	181107G1_2	Analyte	40.0	5.00	19808.34	18879.71	104.92
3	1803499-01 CH-AT-1RW202-1118 0.25415	181107G1_3	Analyte	40.0	5.00	24037.21	18879.71	127.32
4	B8K0010-BSD1 LFB D 0.25	181107G1_4	Analyte	40.0	5.00	24375.38	18879.71	129.11
5	B8K0025-BS1 LFB 0.25	181107G1_5	Analyte	40.0	4.99	24409.22	18879.71	129.29
6	B8K0025-BLK1 LRB 0.25	181107G1_6	Analyte	40.0	4.99	22247.13	18879.71	117.84
7	B8K0025-MS1 LFSM 0.24737	181107G1_7	Analyte	40.0	5.00	22760.17	18879.71	120.55
8	B8K0025-MSD1 LFSMD 0.25331	181107G1_8	Analyte	40.0	5.00	22515.49	18879.71	119.26
9	1803485-01 SWEF1810241230GGA 0.22977	181107G1_9	Analyte	40.0	5.00	23023.07	18879.71	121.95
10	1803507-01 SWEF1810310935KME 0.24551	181107G1_10	Analyte	40.0	4.99	24648.20	18879.71	130.55
11	1803507-02 SWEF1810310950KME-FD 0.25911	181107G1_11	Analyte	40.0	4.99	23892.76	18879.71	126.55
12	1803507-03 FB1810310955KME 0.25909	181107G1_12	Analyte	40.0	5.00	22161.99	18879.71	117.39
13	1803509-01 SWEF1811011440KME 0.25362	181107G1_13	Analyte	40.0	5.00	21167.24	18879.71	112.12
14	1803511-01 SWEF1811011205KME 0.25412	181107G1_14	Analyte	40.0	5.01	24335.88	18879.71	128.90
15	IPA	181107G1_15	Analyte	40.0			18879.71	0.00
16	ST181107G1-2 PFC CS1 537 18J1834	181107G1_16	Analyte	40.0	5.02	21116.67	18879.71	111.85

# CCAL

## Compound 18: 13C2-PFOA

70-140%

ID	Name	Type	Std. Conc	RT	Area	CCAL Area	% Area	
1	IPA	181107G1_1	Analyte	10.0		8868.56	0	
2	<b>ST181107G1-1 PFC CS-1 537 18J1832</b>	181107G1_2	Analyte	10.0	4.22	8868.56	8868.56	100.00
3	1803499-01 CH-AT-1RW202-1118 0.25415	181107G1_3	Analyte	10.0	4.22	10751.34	8868.56	121.23
4	B8K0010-BSD1 LFBD 0.25	181107G1_4	Analyte	10.0	4.22	9537.06	8868.56	107.54
5	B8K0025-BS1 LFB 0.25	181107G1_5	Analyte	10.0	4.22	9240.56	8868.56	104.19
6	B8K0025-BLK1 LRB 0.25	181107G1_6	Analyte	10.0	4.22	9822.10	8868.56	110.75
7	B8K0025-MS1 LFSM 0.24737	181107G1_7	Analyte	10.0	4.22	9754.10	8868.56	109.99
8	B8K0025-MSD1 LFSMD 0.25331	181107G1_8	Analyte	10.0	4.21	9502.23	8868.56	107.15
9	1803485-01 SWEF1810241230GGA 0.22977	181107G1_9	Analyte	10.0	4.22	9567.15	8868.56	107.88
10	1803507-01 SWEF1810310935KME 0.24551	181107G1_10	Analyte	10.0	4.22	9593.90	8868.56	108.18
11	1803507-02 SWEF1810310950KME-FD 0.25911	181107G1_11	Analyte	10.0	4.22	9226.46	8868.56	104.04
12	1803507-03 FB1810310955KME 0.25909	181107G1_12	Analyte	10.0	4.22	9898.90	8868.56	111.62
13	1803509-01 SWEF1811011440KME 0.25362	181107G1_13	Analyte	10.0	4.22	8265.69	8868.56	93.20
14	1803511-01 SWEF1811011205KME 0.25412	181107G1_14	Analyte	10.0	4.22	9692.42	8868.56	109.29
15	IPA	181107G1_15	Analyte	10.0		8868.56		0.00
16	ST181107G1-2 PFC CS1 537 18J1834	181107G1_16	Analyte	10.0	4.22	9741.92	8868.56	109.85

## Compound 19: 13C4-PFOS

ID	Name	Type	Std. Conc	RT	Area	CCAL Area	% Area	
1	IPA	181107G1_1	Analyte	28.7		13090.80	0	
2	<b>ST181107G1-1 PFC CS-1 537 18J1832</b>	181107G1_2	Analyte	28.7	4.64	13090.80	13090.80	100.00
3	1803499-01 CH-AT-1RW202-1118 0.25415	181107G1_3	Analyte	28.7	4.64	16127.67	13090.80	123.20
4	B8K0010-BSD1 LFBD 0.25	181107G1_4	Analyte	28.7	4.64	15165.76	13090.80	115.85
5	B8K0025-BS1 LFB 0.25	181107G1_5	Analyte	28.7	4.64	13185.51	13090.80	100.72
6	B8K0025-BLK1 LRB 0.25	181107G1_6	Analyte	28.7	4.64	13015.68	13090.80	99.43
7	B8K0025-MS1 LFSM 0.24737	181107G1_7	Analyte	28.7	4.64	13783.71	13090.80	105.29
8	B8K0025-MSD1 LFSMD 0.25331	181107G1_8	Analyte	28.7	4.64	13208.38	13090.80	100.90

9	1803485-01 SWEF1810241230GGA 0.22977	181107G1_9	Analyte	28.7	4.64	14276.99	13090.80	109.06
10	1803507-01 SWEF1810310935KME 0.24551	181107G1_10	Analyte	28.7	4.64	13618.14	13090.80	104.03
11	1803507-02 SWEF1810310950KME-FD 0.25911	181107G1_11	Analyte	28.7	4.64	14196.60	13090.80	108.45
12	1803507-03 FB1810310955KME 0.25909	181107G1_12	Analyte	28.7	4.64	14845.44	13090.80	113.40
13	1803509-01 SWEF1811011440KME 0.25362	181107G1_13	Analyte	28.7	4.64	12345.63	13090.80	94.31
14	1803511-01 SWEF1811011205KME 0.25412	181107G1_14	Analyte	28.7	4.64	14049.78	13090.80	107.33
15	IPA	181107G1_15	Analyte	28.7			13090.80	0.00
16	ST181107G1-2 PFC CS1 537 18J1834	181107G1_16	Analyte	28.7	4.64	13307.65	13090.80	101.66

### Compound 20: d3-N-MeFOSAA

ID	Name	Type	Std. Conc	RT	Area	CCAL Area	% Area	
1	IPA	181107G1_1	Analyte	40.0		19808.34	0	
2	<b>ST181107G1-1 PFC CS-1 537 18J1832</b>	181107G1_2	Analyte	40.0	5.00	19808.34	19808.34	100.00
3	1803499-01 CH-AT-1RW202-1118 0.25415	181107G1_3	Analyte	40.0	5.00	24037.21	19808.34	121.35
4	B8K0010-BSD1 LFB 0.25	181107G1_4	Analyte	40.0	5.00	24375.38	19808.34	123.06
5	B8K0025-BS1 LFB 0.25	181107G1_5	Analyte	40.0	4.99	24409.22	19808.34	123.23
6	B8K0025-BLK1 LRB 0.25	181107G1_6	Analyte	40.0	4.99	22247.13	19808.34	112.31
7	B8K0025-MS1 LFSM 0.24737	181107G1_7	Analyte	40.0	5.00	22760.17	19808.34	114.90
8	B8K0025-MSD1 LFSMD 0.25331	181107G1_8	Analyte	40.0	5.00	22515.49	19808.34	113.67
9	1803485-01 SWEF1810241230GGA 0.22977	181107G1_9	Analyte	40.0	5.00	23023.07	19808.34	116.23
10	1803507-01 SWEF1810310935KME 0.24551	181107G1_10	Analyte	40.0	4.99	24648.20	19808.34	124.43
11	1803507-02 SWEF1810310950KME-FD 0.25911	181107G1_11	Analyte	40.0	4.99	23892.76	19808.34	120.62
12	1803507-03 FB1810310955KME 0.25909	181107G1_12	Analyte	40.0	5.00	22161.99	19808.34	111.88
13	1803509-01 SWEF1811011440KME 0.25362	181107G1_13	Analyte	40.0	5.00	21167.24	19808.34	106.86
14	1803511-01 SWEF1811011205KME 0.25412	181107G1_14	Analyte	40.0	5.01	24335.88	19808.34	122.86
15	IPA	181107G1_15	Analyte	40.0			19808.34	0.00
16	ST181107G1-2 PFC CS1 537 18J1834	181107G1_16	Analyte	40.0	5.02	21116.67	19808.34	106.60

# LC Calibration Standards Review Checklist

Q1

Calibration ID:	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
<u>ST18110761-1</u> (L) M H	<del>N/A</del>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
<u>I -2</u> (L) M H	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
_____ L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____ L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Run Log Present:

# of Samples per Sequence Checked:

Instrument Blank Saved: ~~N/A~~

IIS Area Saved:

Reviewed By: MTT 11/12/18

Initials/Date

Full Mass Cal. Date: 9/25/18

Comments:

DW-L14

Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-2.qld

Last Altered: Thursday, November 08, 2018 10:11:25 Pacific Standard Time

Printed: Thursday, November 08, 2018 10:11:45 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1107.mdb 08 Nov 2018 10:11:22

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181107G1\_2, Date: 07-Nov-2018, Time: 16:02:29, ID: ST181107G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

*MTT*  
*11/12/18*

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	7.74e2	1.31e4	1.00		2.94	2.94	1.70	1.94	109.2
2	2 PFHxA	312.8 > 269.0	1.61e3	8.87e3	1.00		3.31	3.31	1.82	2.12	105.9
3	3 PFHpA	362.8 > 319.0	2.06e3	8.87e3	1.00		3.81	3.81	2.32	2.29	114.5
4	4 PFHxS	398.7 > 80.2	7.64e2	1.31e4	1.00		3.93	3.93	1.67	1.91	105.2
5	5 PFOA	412.7 > 368.9	1.98e3	8.87e3	1.00		4.23	4.23	2.23	2.02	101.2
6	6 PFNA	462.8 > 419.0	1.87e3	8.87e3	1.00		4.58	4.58	2.11	2.38	119.1
7	7 PFOS	498.7 > 80.2	3.11e2	1.31e4	1.00		4.64	4.64	0.683	1.83	98.4
8	8 PFDA	512.8 > 468.9	2.73e3	8.87e3	1.00		4.90	4.90	3.08	2.31	115.7
9	9 N-MeFOSAA	569.8 > 419.0	8.74e2	1.98e4	1.00		5.00	5.00	1.76	2.29	114.5
10	10 N-EtFOSAA	583.8 > 419.0	7.28e2	1.98e4	1.00		5.10	5.10	1.47	2.30	114.8
11	11 PFUnA	562.7 > 518.9	2.33e3	8.87e3	1.00		5.11	5.11	2.63	1.99	99.7
12	12 PFDoA	612.8 > 569.0	2.38e3	8.87e3	1.00		5.34	5.34	2.69	2.02	100.8
13	13 PFTTrDA	662.8 > 619.0	2.70e3	8.87e3	1.00		5.56	5.56	3.05	2.23	111.7
14	14 PFTeDA	712.8 > 669.0	2.64e3	8.87e3	1.00		5.74	5.74	2.97	2.29	114.3
15	15 13C2-PFHxA	314.9 > 270.0	8.01e3	8.87e3	1.00	0.897	3.29	3.31	9.03	10.1	100.7
16	16 13C2-PFDA	514.8 > 470.0	1.03e4	8.87e3	1.00	1.160	4.86	4.90	11.6	10.0	100.0
17	17 d5-N-EtFOSAA	588.8 > 419.0	1.74e4	1.98e4	1.00	0.872	5.13	5.09	35.1	40.3	100.7
18	18 13C2-PFOA	414.8 > 370.0	8.87e3	8.87e3	1.00	1.000	4.22	4.22	10.0	10.0	100.0
19	19 13C4-PFOS	502.8 > 80.2	1.31e4	1.31e4	1.00	1.000	4.64	4.64	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.0	1.98e4	1.98e4	1.00	1.000	5.00	5.00	40.0	40.0	100.0

*CAF*  
*11/8/18*

Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-IIS.qld

Last Altered: Thursday, November 08, 2018 09:50:08 Pacific Standard Time

Printed: Thursday, November 08, 2018 10:05:41 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Compound name: PFBS

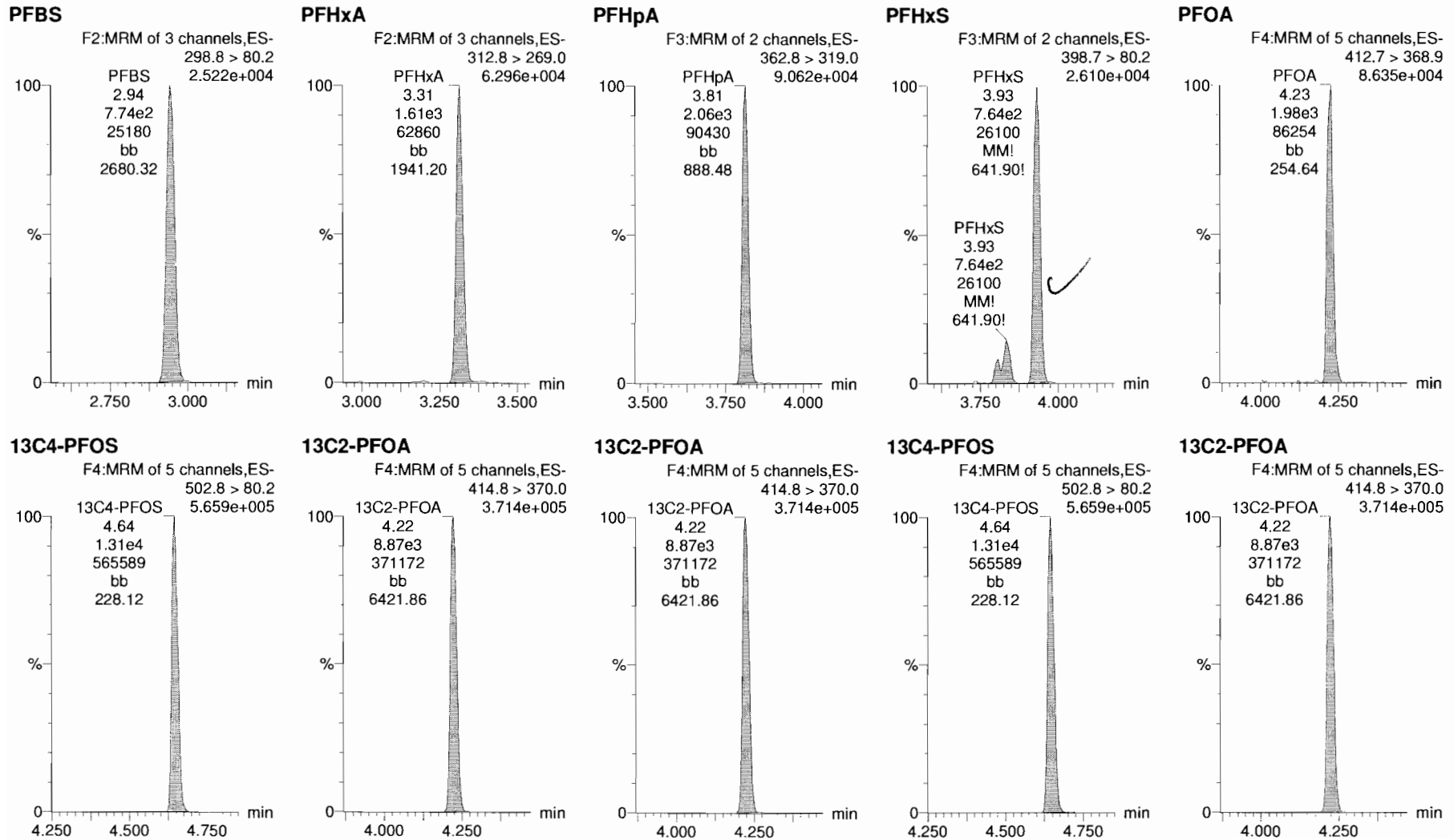
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1	1	181107G1_1	IPA	07-Nov-18	15:50:26
2	2	181107G1_2	ST181107G1-1 PFC CS-1 537 18J1832 ✓	07-Nov-18	16:02:29
3	3	181107G1_3	1803499-01 CH-AT-1RW202-1118 0.25415	07-Nov-18	16:22:04
4	4	181107G1_4	B8K0010-BSD1 LFB0.25	07-Nov-18	16:34:04
5	5	181107G1_5	B8K0025-BS1 LFB 0.25	07-Nov-18	16:47:03
6	6	181107G1_6	B8K0025-BLK1 LRB 0.25	07-Nov-18	17:00:28
7	7	181107G1_7	B8K0025-MS1 LFSM 0.24737	07-Nov-18	17:12:58
8	8	181107G1_8	B8K0025-MSD1 LFSMD 0.25331	07-Nov-18	17:25:53
9	9	181107G1_9	1803485-01 SWEF1810241230GGA 0.22977	07-Nov-18	17:38:51
10	10	181107G1_10	1803507-01 SWEF1810310935KME 0.24551	07-Nov-18	17:51:49
11	11	181107G1_11	1803507-02 SWEF1810310950KME-FD 0.25911	07-Nov-18	18:04:46
12	12	181107G1_12	1803507-03 FB1810310955KME 0.25909	07-Nov-18	18:17:47
13	13	181107G1_13	1803509-01 SWEF1811011440KME 0.25362	07-Nov-18	18:30:50
14	14	181107G1_14	1803511-01 SWEF1811011205KME 0.25412	07-Nov-18	18:43:42
15	15	181107G1_15	IPA	07-Nov-18	18:56:40
16	16	181107G1_16	ST181107G1-2 PFC CS1 537 18J1834 ✓	07-Nov-18	19:09:38

Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-2.qld

Last Altered: Thursday, November 08, 2018 10:11:25 Pacific Standard Time  
Printed: Thursday, November 08, 2018 10:11:45 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1107.mdb 08 Nov 2018 10:11:22  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181107G1\_2, Date: 07-Nov-2018, Time: 16:02:29, ID: ST181107G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

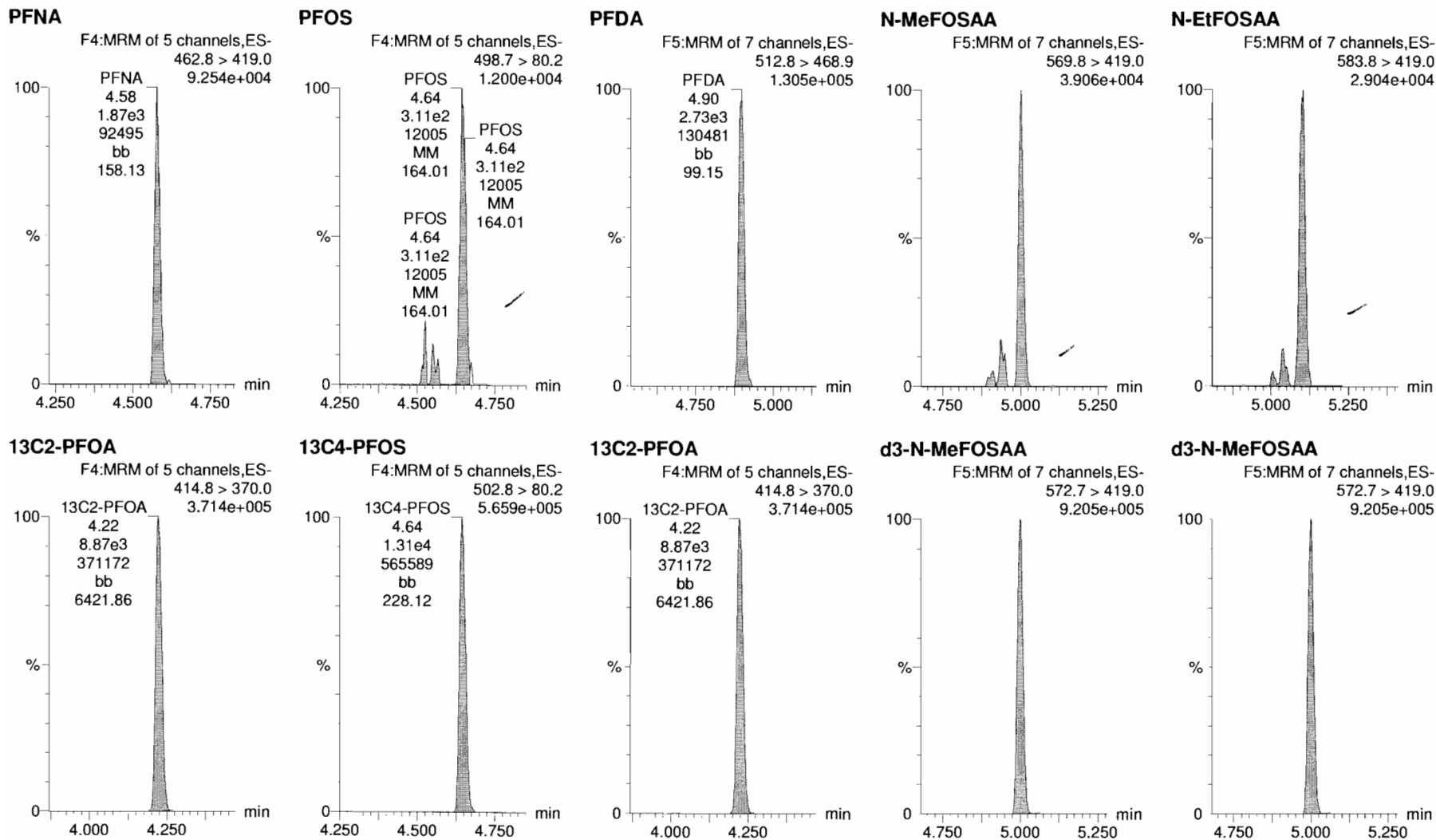




Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-2.qld

Last Altered: Thursday, November 08, 2018 10:11:25 Pacific Standard Time  
Printed: Thursday, November 08, 2018 10:11:45 Pacific Standard Time

Name: 181107G1\_2, Date: 07-Nov-2018, Time: 16:02:29, ID: ST181107G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

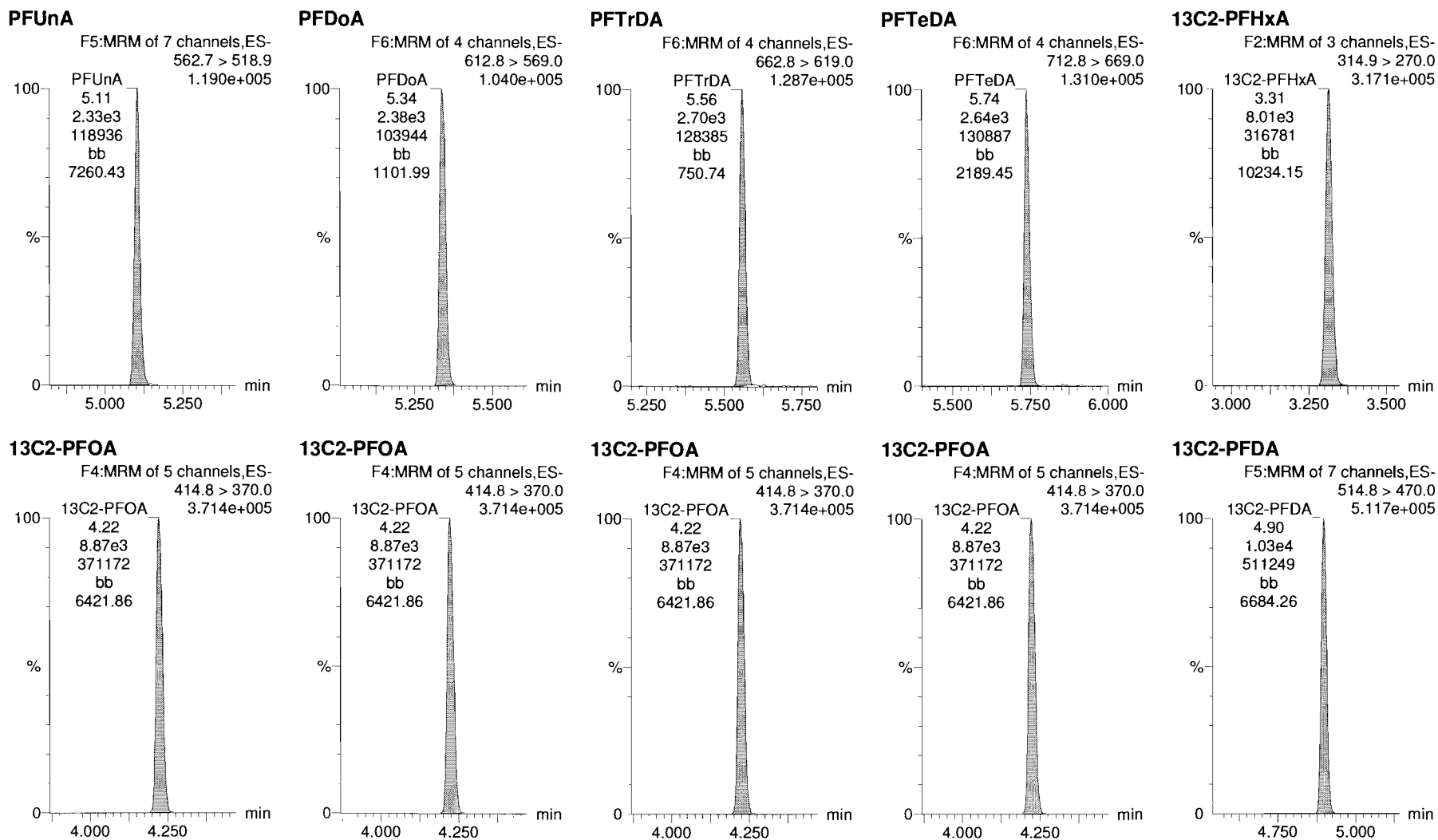


Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-2.qld

Last Altered: Thursday, November 08, 2018 10:11:25 Pacific Standard Time

Printed: Thursday, November 08, 2018 10:11:45 Pacific Standard Time

Name: 181107G1\_2, Date: 07-Nov-2018, Time: 16:02:29, ID: ST181107G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

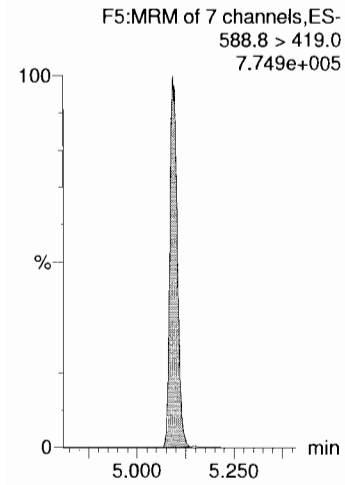


Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-2.qld

Last Altered: Thursday, November 08, 2018 10:11:25 Pacific Standard Time  
Printed: Thursday, November 08, 2018 10:11:45 Pacific Standard Time

Name: 181107G1\_2, Date: 07-Nov-2018, Time: 16:02:29, ID: ST181107G1-1 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-16.qld

Last Altered: Thursday, November 08, 2018 10:14:45 Pacific Standard Time

Printed: Thursday, November 08, 2018 10:15:21 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1107.mdb 08 Nov 2018 10:11:22

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

*MTJ*  
*11/12/18*

Name: 181107G1\_16, Date: 07-Nov-2018, Time: 19:09:38, ID: ST181107G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	3.46e3	1.33e4	1.00		2.93	2.94	7.45	8.53	96.5
2	2 PFHxA	312.8 > 269.0	7.32e3	9.74e3	1.00		3.31	3.31	7.52	8.75	87.5
3	3 PFHpA	362.8 > 319.0	9.18e3	9.74e3	1.00		3.81	3.81	9.43	9.29	92.9
4	4 PFHxS	398.7 > 80.2	3.49e3	1.33e4	1.00		3.92	3.93	7.52	8.60	94.3
5	5 PFOA	412.7 > 368.9	9.54e3	9.74e3	1.00		4.22	4.22	9.79	8.88	88.8
6	6 PFNA	462.8 > 419.0	7.72e3	9.74e3	1.00		4.57	4.57	7.93	8.95	89.5
7	7 PFOS	498.7 > 80.2	1.51e3	1.33e4	1.00		4.63	4.64	3.26	8.74	94.6
8	8 PFDA	512.8 > 468.9	1.09e4	9.74e3	1.00		4.89	4.90	11.1	8.37	83.7
9	9 N-MeFOSAA	569.8 > 419.0	3.79e3	2.11e4	1.00		5.02	5.02	7.18	9.32	93.2
10	10 N-EtFOSAA	583.8 > 419.0	3.53e3	2.11e4	1.00		5.12	5.11	6.68	10.4	104.3
11	11 PFUnA	562.7 > 518.9	1.12e4	9.74e3	1.00		5.10	5.11	11.5	8.74	87.4
12	12 PFDoA	612.8 > 569.0	1.07e4	9.74e3	1.00		5.33	5.33	11.0	8.26	82.6
13	13 PFTrDA	662.8 > 619.0	1.16e4	9.74e3	1.00		5.55	5.55	11.9	8.75	87.5
14	14 PFTeDA	712.8 > 669.0	1.19e4	9.74e3	1.00		5.73	5.73	12.2	9.38	93.8
15	15 13C2-PFHxA	314.9 > 270.0	8.01e3	9.74e3	1.00	0.897	3.29	3.31	8.22	9.17	91.7
16	16 13C2-PFDA	514.8 > 470.0	9.92e3	9.74e3	1.00	1.160	4.85	4.90	10.2	8.78	87.8
17	17 d5-N-EtFOSAA	588.8 > 419.0	1.80e4	2.11e4	1.00	0.872	5.15	5.10	34.0	39.0	97.6
18	18 13C2-PFOA	414.8 > 370.0	9.74e3	9.74e3	1.00	1.000	4.22	4.22	10.0	10.0	100.0
19	19 13C4-PFOS	502.8 > 80.2	1.33e4	1.33e4	1.00	1.000	4.64	4.64	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.0	2.11e4	2.11e4	1.00	1.000	5.00	5.02	40.0	40.0	100.0

Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-IIS.qld

Last Altered: Thursday, November 08, 2018 09:50:08 Pacific Standard Time

Printed: Thursday, November 08, 2018 10:05:41 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1106.mdb 06 Nov 2018 09:59:16

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Compound name: PFBS

#	Name	ID	Acq.Date	Acq.Time
1	1 181107G1_1	IPA	07-Nov-18	15:50:26
2	2 181107G1_2	ST181107G1-1 PFC CS-1 537 18J1832	07-Nov-18	16:02:29
3	3 181107G1_3	1803499-01 CH-AT-1RW202-1118 0.25415	07-Nov-18	16:22:04
4	4 181107G1_4	B8K0010-BSD1 LFB0.25	07-Nov-18	16:34:04
5	5 181107G1_5	B8K0025-BS1 LFB 0.25	07-Nov-18	16:47:03
6	6 181107G1_6	B8K0025-BLK1 LRB 0.25	07-Nov-18	17:00:28
7	7 181107G1_7	B8K0025-MS1 LFSM 0.24737	07-Nov-18	17:12:58
8	8 181107G1_8	B8K0025-MSD1 LFSMD 0.25331	07-Nov-18	17:25:53
9	9 181107G1_9	1803485-01 SWEF1810241230GGA 0.22977	07-Nov-18	17:38:51
10	10 181107G1_10	1803507-01 SWEF1810310935KME 0.24551	07-Nov-18	17:51:49
11	11 181107G1_11	1803507-02 SWEF1810310950KME-FD 0.25911	07-Nov-18	18:04:46
12	12 181107G1_12	1803507-03 FB1810310955KME 0.25909	07-Nov-18	18:17:47
13	13 181107G1_13	1803509-01 SWEF1811011440KME 0.25362	07-Nov-18	18:30:50
14	14 181107G1_14	1803511-01 SWEF1811011205KME 0.25412	07-Nov-18	18:43:42
15	15 181107G1_15	IPA	07-Nov-18	18:56:40
16	16 181107G1_16	ST181107G1-2 PFC CS1 537 18J1834	07-Nov-18	19:09:38

Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-16.qld

Last Altered: Thursday, November 08, 2018 10:14:45 Pacific Standard Time

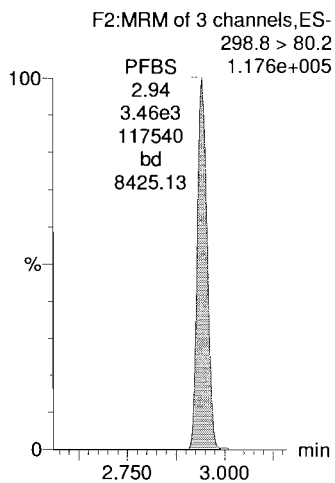
Printed: Thursday, November 08, 2018 10:15:21 Pacific Standard Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1107.mdb 08 Nov 2018 10:11:22

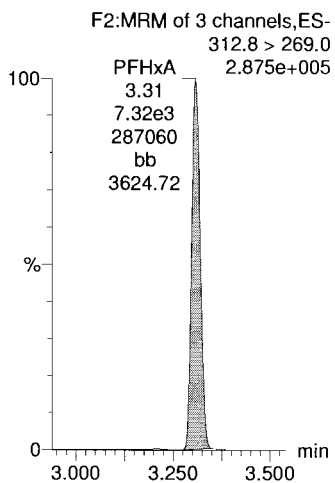
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 09:23:39

Name: 181107G1\_16, Date: 07-Nov-2018, Time: 19:09:38, ID: ST181107G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

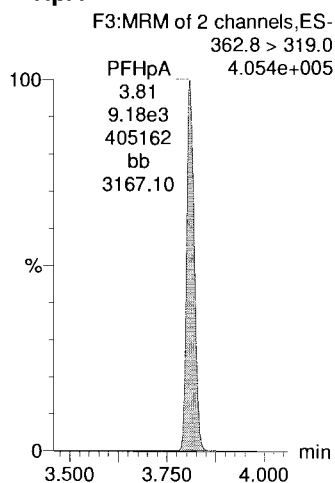
**PFBS**



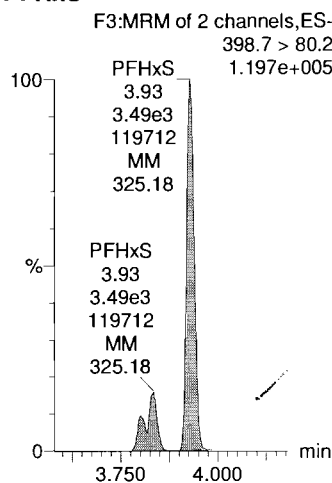
**PFHxA**



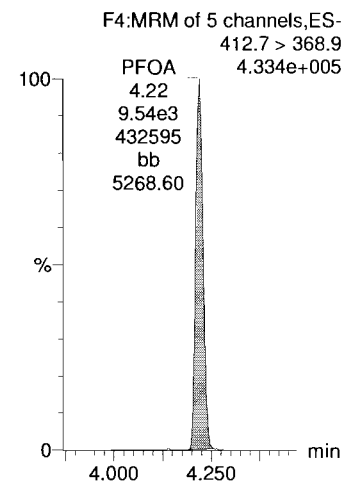
**PFHpA**



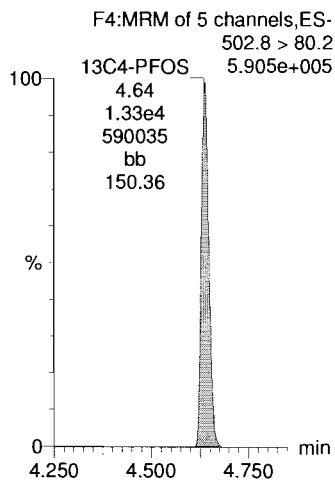
**PFHxS**



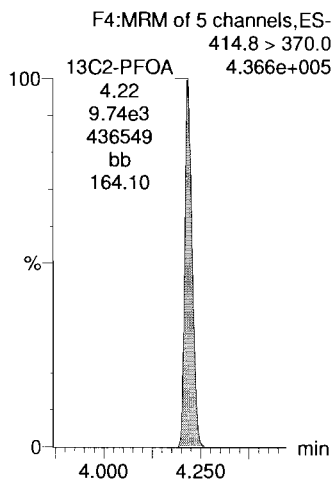
**PFOA**



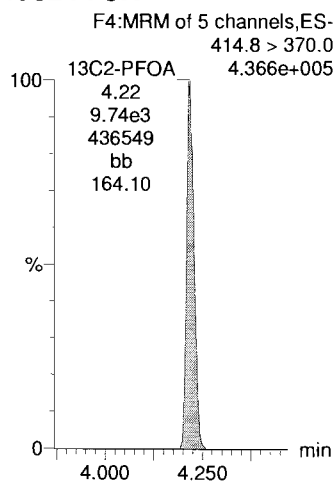
**13C4-PFOS**



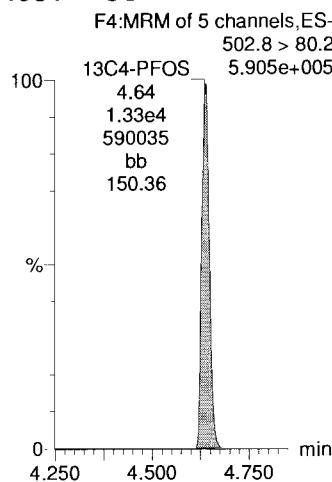
**13C2-PFOA**



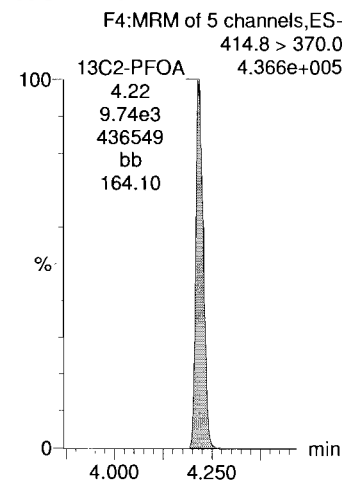
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

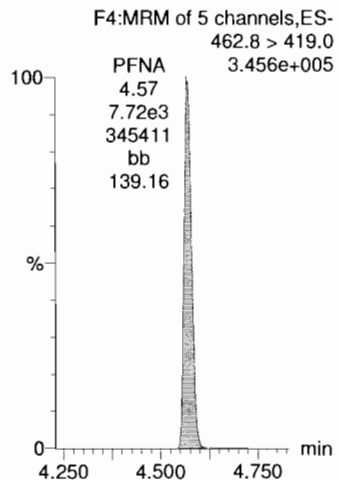


Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-16.qld

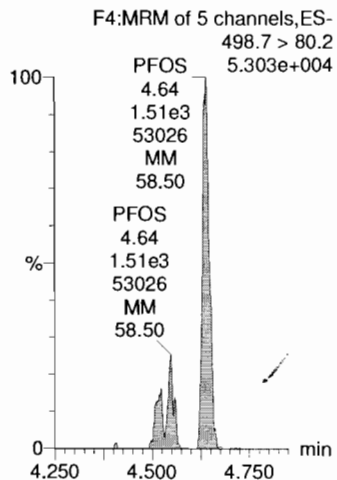
Last Altered: Thursday, November 08, 2018 10:14:45 Pacific Standard Time  
Printed: Thursday, November 08, 2018 10:15:21 Pacific Standard Time

Name: 181107G1\_16, Date: 07-Nov-2018, Time: 19:09:38, ID: ST181107G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

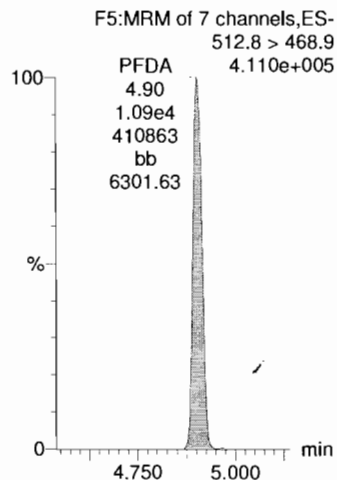
**PFNA**



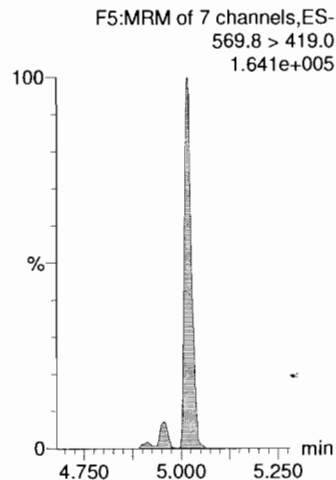
**PFOS**



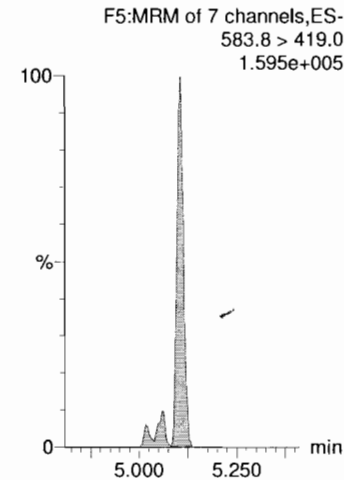
**PFDA**



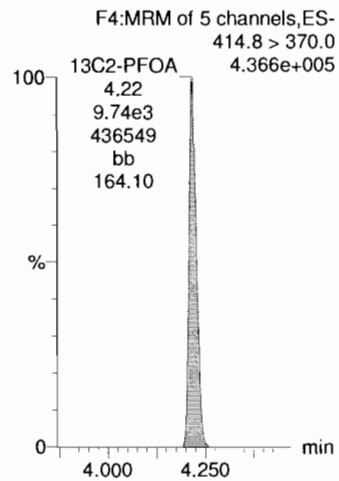
**N-MeFOSAA**



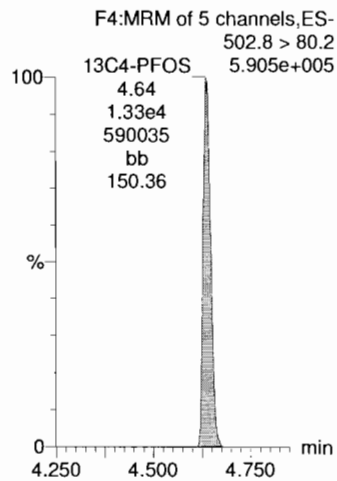
**N-EtFOSAA**



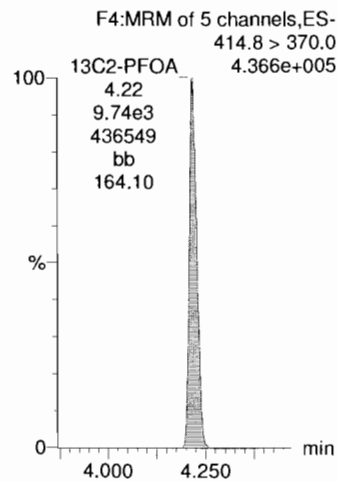
**13C2-PFOA**



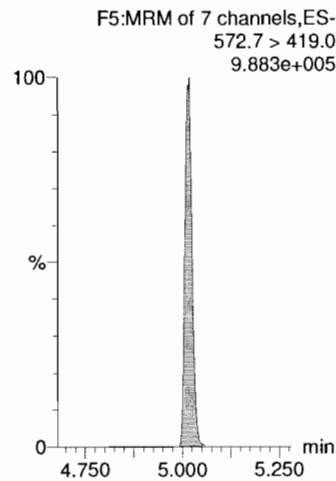
**13C4-PFOS**



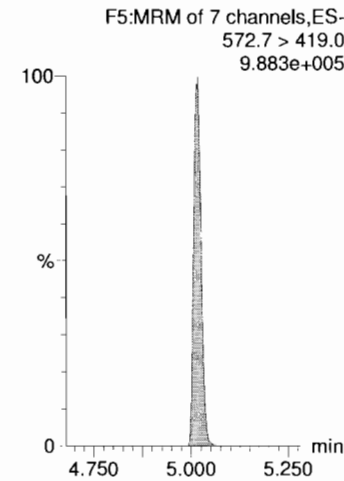
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

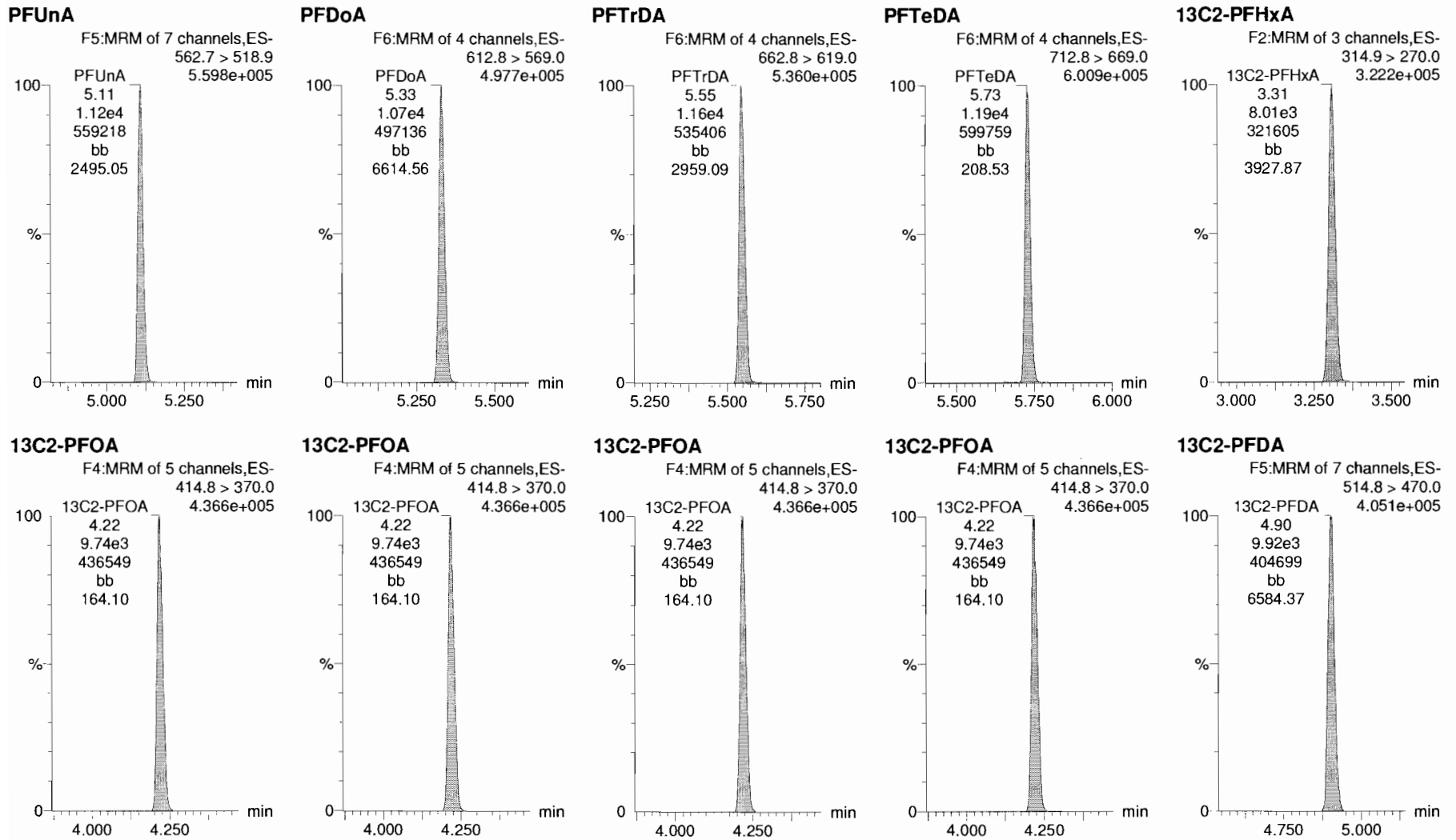


Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-16.qld

Last Altered: Thursday, November 08, 2018 10:14:45 Pacific Standard Time

Printed: Thursday, November 08, 2018 10:15:21 Pacific Standard Time

Name: 181107G1\_16, Date: 07-Nov-2018, Time: 19:09:38, ID: ST181107G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834





Dataset: X:\G1.PRO\Results\2018\181107G1\181107G1-16.qld

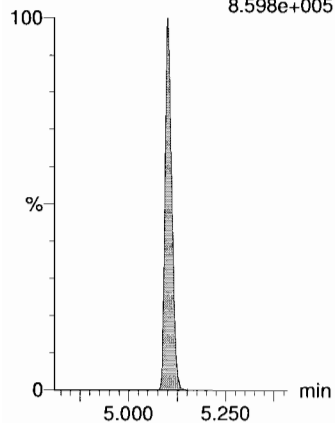
Last Altered: Thursday, November 08, 2018 10:14:45 Pacific Standard Time

Printed: Thursday, November 08, 2018 10:15:21 Pacific Standard Time

Name: 181107G1\_16, Date: 07-Nov-2018, Time: 19:09:38, ID: ST181107G1-2 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

**d5-N-EtFOSAA**

F5:MRM of 7 channels,ES-  
588.8 > 419.0  
8.598e+005



**INITIAL CALIBRATION (ICAL)**  
**INCLUDING ASSOCIATED**  
**INITIAL CALIBRATION VERIFICATION (ICV)**

*Low PE*  
~~ELGOSAA = 0.464~~

Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
 Printed: Friday, October 26, 2018 10:27:15 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1024.mdb 26 Oct 2018 10:20:09  
 Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 10:23:39

*✓AD 10/29/18*

**Compound name: PFBS**

Coefficient of Determination: R<sup>2</sup> = 0.998838

Calibration curve: 0.873282 \* x

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.222	2.92	111.666	12646.237	0.253	0.3	30.7	NO	0.999	NO	bb
2	2 181024G1_3	Standard	0.444	2.91	186.233	13916.652	0.384	0.4	-0.9	NO	0.999	NO	bb
3	3 181024G1_4	Standard	0.888	2.91	359.799	14276.745	0.723	0.8	-6.7	NO	0.999	NO	bb
4	4 181024G1_5	Standard	1.780	2.92	738.136	12860.014	1.647	1.9	6.0	NO	0.999	NO	bb
5	5 181024G1_6	Standard	4.440	2.92	1914.692	12523.408	4.388	5.0	13.2	NO	0.999	NO	bb
6	6 181024G1_7	Standard	8.840	2.92	3381.492	13499.237	7.189	8.2	-6.9	NO	0.999	NO	bb
7	7 181024G1_8	Standard	22.100	2.92	8310.966	12678.938	18.813	21.5	-2.5	NO	0.999	NO	bb
8	8 181024G1_9	Standard	44.200	2.92	17010.152	12198.026	40.022	45.8	3.7	NO	0.999	NO	bb
9	9 181024G1_10	Standard	66.400	2.92	23843.691	12084.720	56.626	64.8	-2.3	NO	0.999	NO	bb
10	10 181024G1_11	Standard	88.500	2.92	34113.691	12611.543	77.632	88.9	0.4	NO	0.999	NO	bd

**Compound name: PFHxA**

Coefficient of Determination: R<sup>2</sup> = 0.998600

Calibration curve: 0.859305 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	3.28	218.791	9476.007	0.231	0.3	7.5	NO	0.999	NO	bb
2	2 181024G1_3	Standard	0.500	3.28	448.172	9139.188	0.490	0.6	14.1	NO	0.999	NO	bb
3	3 181024G1_4	Standard	1.000	3.27	817.445	8157.577	1.002	1.2	16.6	NO	0.999	NO	bb
4	4 181024G1_5	Standard	2.000	3.28	1644.673	8937.765	1.840	2.1	7.1	NO	0.999	NO	bd
5	5 181024G1_6	Standard	5.000	3.28	4142.214	8986.205	4.610	5.4	7.3	NO	0.999	NO	bb
6	6 181024G1_7	Standard	10.000	3.28	6827.012	8745.664	7.806	9.1	-9.2	NO	0.999	NO	bb
7	7 181024G1_8	Standard	25.000	3.28	17138.445	8313.215	20.616	24.0	-4.0	NO	0.999	NO	bb
8	8 181024G1_9	Standard	50.000	3.28	35739.492	8410.053	42.496	49.5	-1.1	NO	0.999	NO	bb
9	9 181024G1_10	Standard	75.000	3.28	52198.434	7774.175	67.143	78.1	4.2	NO	0.999	NO	bd
10	10 181024G1_11	Standard	100.000	3.28	69950.188	8258.241	84.703	98.6	-1.4	NO	0.999	NO	bb

*Cal 10/26/18*

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**Compound name: PFHpA**

Coefficient of Determination: R<sup>2</sup> = 0.999287

Calibration curve: 1.01436 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	3.80	213.269	9476.007	0.225	0.2	-11.2	NO	0.999	NO	bb
2	2 181024G1_3	Standard	0.500	3.80	505.151	9139.188	0.553	0.5	9.0	NO	0.999	NO	bb
3	3 181024G1_4	Standard	1.000	3.80	951.644	8157.577	1.167	1.2	15.0	NO	0.999	NO	bd
4	4 181024G1_5	Standard	2.000	3.80	1833.513	8937.765	2.051	2.0	1.1	NO	0.999	NO	bd
5	5 181024G1_6	Standard	5.000	3.80	5022.491	8986.205	5.589	5.5	10.2	NO	0.999	NO	bd
6	6 181024G1_7	Standard	10.000	3.80	8248.814	8745.664	9.432	9.3	-7.0	NO	0.999	NO	bd
7	7 181024G1_8	Standard	25.000	3.80	20601.439	8313.215	24.782	24.4	-2.3	NO	0.999	NO	bd
8	8 181024G1_9	Standard	50.000	3.80	42612.348	8410.053	50.668	50.0	-0.1	NO	0.999	NO	bd
9	9 181024G1_10	Standard	75.000	3.79	60331.012	7774.175	77.604	76.5	2.0	NO	0.999	NO	bb
10	10 181024G1_11	Standard	100.000	3.80	83025.984	8258.241	100.537	99.1	-0.9	NO	0.999	NO	bb

**Compound name: PFHxS**

Coefficient of Determination: R<sup>2</sup> = 0.998824

Calibration curve: 0.874359 \* x

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.228	3.92	90.663	12646.237	0.206	0.2	3.2	NO	0.999	NO	MM
2	2 181024G1_3	Standard	0.456	3.92	192.482	13916.652	0.397	0.5	-0.4	NO	0.999	NO	MM
3	3 181024G1_4	Standard	0.912	3.92	418.463	14276.745	0.841	1.0	5.5	NO	0.999	NO	MM
4	4 181024G1_5	Standard	1.820	3.92	744.093	12860.014	1.661	1.9	4.4	NO	0.999	NO	MM
5	5 181024G1_6	Standard	4.560	3.92	1972.936	12523.408	4.521	5.2	13.4	NO	0.999	NO	MM
6	6 181024G1_7	Standard	9.120	3.92	3470.276	13499.237	7.378	8.4	-7.5	NO	0.999	NO	MM
7	7 181024G1_8	Standard	22.800	3.92	8725.886	12678.938	19.752	22.6	-0.9	NO	0.999	NO	MM
8	8 181024G1_9	Standard	45.500	3.92	17687.941	12198.026	41.617	47.6	4.6	NO	0.999	NO	MM
9	9 181024G1_10	Standard	68.200	3.92	25052.084	12084.720	59.496	68.0	-0.2	NO	0.999	NO	MM
10	10 181024G1_11	Standard	91.000	3.92	34273.426	12611.543	77.996	89.2	-2.0	NO	0.999	NO	MM

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**Compound name: PFOA**

Coefficient of Determination: R<sup>2</sup> = 0.998403

Calibration curve: 1.10207 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	4.22	256.693	9476.007	0.271	0.2	-1.7	NO	0.998	NO	MM
2	2 181024G1_3	Standard	0.500	4.22	549.000	9139.188	0.601	0.5	9.0	NO	0.998	NO	MM
3	3 181024G1_4	Standard	1.000	4.22	952.272	8157.577	1.167	1.1	5.9	NO	0.998	NO	bd
4	4 181024G1_5	Standard	2.000	4.21	2177.193	8937.765	2.436	2.2	10.5	NO	0.998	NO	MM
5	5 181024G1_6	Standard	5.000	4.21	5650.546	8986.205	6.288	5.7	14.1	NO	0.998	NO	bd
6	6 181024G1_7	Standard	10.000	4.21	9330.609	8745.664	10.669	9.7	-3.2	NO	0.998	NO	MM
7	7 181024G1_8	Standard	25.000	4.21	22974.910	8313.215	27.637	25.1	0.3	NO	0.998	NO	bb
8	8 181024G1_9	Standard	50.000	4.21	46128.688	8410.053	54.849	49.8	-0.5	NO	0.998	NO	bb
9	9 181024G1_10	Standard	75.000	4.21	66949.211	7774.175	86.117	78.1	4.2	NO	0.998	NO	bb
10	10 181024G1_11	Standard	100.000	4.21	87657.500	8258.241	106.145	96.3	-3.7	NO	0.998	NO	bb

**Compound name: PFNA**

Coefficient of Determination: R<sup>2</sup> = 0.998293

Calibration curve: 0.885536 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	4.56	159.845	9476.007	0.169	0.2	-23.8	NO	0.998	NO	MM
2	2 181024G1_3	Standard	0.500	4.57	367.978	9139.188	0.403	0.5	-9.1	NO	0.998	NO	MM
3	3 181024G1_4	Standard	1.000	4.56	889.452	8157.577	1.090	1.2	23.1	NO	0.998	NO	bb
4	4 181024G1_5	Standard	2.000	4.56	1707.890	8937.765	1.911	2.2	7.9	NO	0.998	NO	bd
5	5 181024G1_6	Standard	5.000	4.56	4643.777	8986.205	5.168	5.8	16.7	NO	0.998	NO	bb
6	6 181024G1_7	Standard	10.000	4.56	7725.455	8745.664	8.833	10.0	-0.2	NO	0.998	NO	bd
7	7 181024G1_8	Standard	25.000	4.56	19175.912	8313.215	23.067	26.0	4.2	NO	0.998	NO	bd
8	8 181024G1_9	Standard	50.000	4.56	37699.285	8410.053	44.826	50.6	1.2	NO	0.998	NO	bd
9	9 181024G1_10	Standard	75.000	4.56	52363.836	7774.175	67.356	76.1	1.4	NO	0.998	NO	bb
10	10 181024G1_11	Standard	100.000	4.56	70331.172	8258.241	85.165	96.2	-3.8	NO	0.998	NO	bd

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**Compound name: PFOS**

Coefficient of Determination: R<sup>2</sup> = 0.998617

Calibration curve: 0.372898 \* x

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x-excluded
1	1 181024G1_2	Standard	0.232	4.64	22.173	12646.237	0.050	0.1	-41.8	NO	0.999	NO	MM
2	2 181024G1_3	Standard	0.464	4.63	65.254	13916.652	0.135	0.4	-22.2	NO	0.999	NO	MM
3	3 181024G1_4	Standard	0.928	4.62	120.921	14276.745	0.243	0.7	-29.8	NO	0.999	NO	MM
4	4 181024G1_5	Standard	1.860	4.63	308.732	12860.014	0.689	1.8	-0.7	NO	0.999	NO	MM
5	5 181024G1_6	Standard	4.640	4.62	859.264	12523.408	1.969	5.3	13.8	NO	0.999	NO	MM
6	6 181024G1_7	Standard	9.240	4.63	1486.337	13499.237	3.160	8.5	-8.3	NO	0.999	NO	MM
7	7 181024G1_8	Standard	23.100	4.62	3790.995	12678.938	8.581	23.0	-0.4	NO	0.999	NO	MM
8	8 181024G1_9	Standard	46.200	4.63	7504.639	12198.026	17.657	47.4	2.5	NO	0.999	NO	MM
9	9 181024G1_10	Standard	69.400	4.63	10918.725	12084.720	25.931	69.5	0.2	NO	0.999	NO	MM
10	10 181024G1_11	Standard	92.500	4.63	15060.630	12611.543	34.273	91.9	-0.6	NO	0.999	NO	MM

**Compound name: PFDA**

Coefficient of Determination: R<sup>2</sup> = 0.999129

Calibration curve: 1.33223 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x-excluded
1	1 181024G1_2	Standard	0.250	4.88	380.102	9476.007	0.401	0.3	20.4	NO	0.999	NO	bb
2	2 181024G1_3	Standard	0.500	4.89	688.940	9139.188	0.754	0.6	13.2	NO	0.999	NO	MM
3	3 181024G1_4	Standard	1.000	4.89	1410.135	8157.577	1.729	1.3	29.8	NO	0.999	NO	MM
4	4 181024G1_5	Standard	2.000	4.89	2682.422	8937.765	3.001	2.3	12.6	NO	0.999	NO	bd
5	5 181024G1_6	Standard	5.000	4.88	6329.661	8986.205	7.044	5.3	5.7	NO	0.999	NO	bd
6	6 181024G1_7	Standard	10.000	4.89	11678.246	8745.664	13.353	10.0	0.2	NO	0.999	NO	bd
7	7 181024G1_8	Standard	25.000	4.88	27095.275	8313.215	32.593	24.5	-2.1	NO	0.999	NO	bb
8	8 181024G1_9	Standard	50.000	4.88	57258.160	8410.053	68.083	51.1	2.2	NO	0.999	NO	bb
9	9 181024G1_10	Standard	75.000	4.88	77842.836	7774.175	100.130	75.2	0.2	NO	0.999	NO	bb
10	10 181024G1_11	Standard	100.000	4.89	108140.711	8258.241	130.949	98.3	-1.7	NO	0.999	NO	bb

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**Compound name: N-MeFOSAA**

Coefficient of Determination: R<sup>2</sup> = 0.998493

Calibration curve: 0.770406 \* x

Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	4.99	54.053	20688.383	0.105	0.1	-45.7	NO	0.998	NO	MM
2	2 181024G1_3	Standard	0.500	4.99	193.095	18979.391	0.407	0.5	5.6	NO	0.998	NO	MM
3	3 181024G1_4	Standard	1.000	4.99	316.938	17678.178	0.717	0.9	-6.9	NO	0.998	NO	MM
4	4 181024G1_5	Standard	2.000	5.00	694.269	19930.213	1.393	1.8	-9.6	NO	0.998	NO	MM
5	5 181024G1_6	Standard	5.000	5.00	1848.305	19914.217	3.713	4.8	-3.6	NO	0.998	NO	MM
6	6 181024G1_7	Standard	10.000	5.00	3229.577	17850.156	7.237	9.4	-6.1	NO	0.998	NO	MM
7	7 181024G1_8	Standard	25.000	5.00	8446.760	19072.102	17.715	23.0	-8.0	NO	0.998	NO	MM
8	8 181024G1_9	Standard	50.000	5.00	18012.658	18887.098	38.148	49.5	-1.0	NO	0.998	NO	MM
9	9 181024G1_10	Standard	75.000	5.00	26182.736	18018.045	58.126	75.4	0.6	NO	0.998	NO	MM
10	10 181024G1_11	Standard	100.000	5.00	35330.113	17779.283	79.486	103.2	3.2	NO	0.998	NO	MM

**Compound name: N-EtFOSAA**

Coefficient of Determination: R<sup>2</sup> = 0.997312

Calibration curve: 0.640535 \* x

Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	5.10	33.338	20688.383	0.064	0.1	-59.7	NO	0.997	NO	MMX
2	2 181024G1_3	Standard	0.500	5.10	126.726	18979.391	0.267	0.4	-16.6	NO	0.997	NO	MM
3	3 181024G1_4	Standard	1.000	5.10	300.571	17678.178	0.680	1.1	6.2	NO	0.997	NO	MM
4	4 181024G1_5	Standard	2.000	5.10	681.500	19930.213	1.368	2.1	6.8	NO	0.997	NO	MM
5	5 181024G1_6	Standard	5.000	5.11	1678.299	19914.217	3.371	5.3	5.3	NO	0.997	NO	MM
6	6 181024G1_7	Standard	10.000	5.11	2839.550	17850.156	6.363	9.9	-0.7	NO	0.997	NO	MM
7	7 181024G1_8	Standard	25.000	5.11	7126.503	19072.102	14.946	23.3	-6.7	NO	0.997	NO	MM
8	8 181024G1_9	Standard	50.000	5.11	14916.484	18887.098	31.591	49.3	-1.4	NO	0.997	NO	MM
9	9 181024G1_10	Standard	75.000	5.11	20578.338	18018.045	45.684	71.3	-4.9	NO	0.997	NO	MM
10	10 181024G1_11	Standard	100.000	5.11	30097.387	17779.283	67.713	105.7	5.7	NO	0.997	NO	MM

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**Compound name: PFUnA**

Coefficient of Determination: R<sup>2</sup> = 0.998451

Calibration curve: 1.31676 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	5.10	308.662	9476.007	0.326	0.2	-1.1	NO	0.998	NO	MM
2	2 181024G1_3	Standard	0.500	5.11	680.149	9139.188	0.744	0.6	13.0	NO	0.998	NO	bb
3	3 181024G1_4	Standard	1.000	5.11	1392.562	8157.577	1.707	1.3	29.6	NO	0.998	NO	bb
4	4 181024G1_5	Standard	2.000	5.11	2755.836	8937.765	3.083	2.3	17.1	NO	0.998	NO	bb
5	5 181024G1_6	Standard	5.000	5.11	7008.992	8986.205	7.800	5.9	18.5	NO	0.998	NO	bb
6	6 181024G1_7	Standard	10.000	5.11	10735.274	8745.664	12.275	9.3	-6.8	NO	0.998	NO	bb
7	7 181024G1_8	Standard	25.000	5.11	27896.963	8313.215	33.557	25.5	1.9	NO	0.998	NO	bb
8	8 181024G1_9	Standard	50.000	5.12	54901.680	8410.053	65.281	49.6	-0.8	NO	0.998	NO	bd
9	9 181024G1_10	Standard	75.000	5.12	75888.477	7774.175	97.616	74.1	-1.2	NO	0.998	NO	bd
10	10 181024G1_11	Standard	100.000	5.12	108588.297	8258.241	131.491	99.9	-0.1	NO	0.998	NO	bb

**Compound name: PFDaA**

Coefficient of Determination: R<sup>2</sup> = 0.998667

Calibration curve: 1.33132 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	5.34	292.930	9476.007	0.309	0.2	-7.1	NO	0.999	NO	bb
2	2 181024G1_3	Standard	0.500	5.34	612.306	9139.188	0.670	0.5	0.6	NO	0.999	NO	bb
3	3 181024G1_4	Standard	1.000	5.34	1400.994	8157.577	1.717	1.3	29.0	NO	0.999	NO	bb
4	4 181024G1_5	Standard	2.000	5.34	2740.175	8937.765	3.066	2.3	15.1	NO	0.999	NO	bb
5	5 181024G1_6	Standard	5.000	5.34	6490.797	8986.205	7.223	5.4	8.5	NO	0.999	NO	bd
6	6 181024G1_7	Standard	10.000	5.34	10895.077	8745.664	12.458	9.4	-6.4	NO	0.999	NO	bd
7	7 181024G1_8	Standard	25.000	5.34	26620.891	8313.215	32.022	24.1	-3.8	NO	0.999	NO	bb
8	8 181024G1_9	Standard	50.000	5.33	56558.148	8410.053	67.251	50.5	1.0	NO	0.999	NO	bb
9	9 181024G1_10	Standard	75.000	5.34	79695.711	7774.175	102.513	77.0	2.7	NO	0.999	NO	bd
10	10 181024G1_11	Standard	100.000	5.34	107821.750	8258.241	130.563	98.1	-1.9	NO	0.999	NO	bb



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**Compound name: PFTrDA**

Coefficient of Determination: R<sup>2</sup> = 0.998707

Calibration curve: 1.36446 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	5.55	335.053	9476.007	0.354	0.3	3.7	NO	0.999	NO	bb
2	2 181024G1_3	Standard	0.500	5.55	690.569	9139.188	0.756	0.6	10.8	NO	0.999	NO	bb
3	3 181024G1_4	Standard	1.000	5.55	1236.387	8157.577	1.516	1.1	11.1	NO	0.999	NO	bb
4	4 181024G1_5	Standard	2.000	5.55	2723.248	8937.765	3.047	2.2	11.7	NO	0.999	NO	bb
5	5 181024G1_6	Standard	5.000	5.55	7023.063	8986.205	7.815	5.7	14.6	NO	0.999	NO	bb
6	6 181024G1_7	Standard	10.000	5.55	11594.398	8745.664	13.257	9.7	-2.8	NO	0.999	NO	bb
7	7 181024G1_8	Standard	25.000	5.55	28528.834	8313.215	34.317	25.2	0.6	NO	0.999	NO	bb
8	8 181024G1_9	Standard	50.000	5.54	59680.570	8410.053	70.963	52.0	4.0	NO	0.999	NO	bb
9	9 181024G1_10	Standard	75.000	5.54	79524.828	7774.175	102.294	75.0	-0.0	NO	0.999	NO	bd
10	10 181024G1_11	Standard	100.000	5.54	109322.828	8258.241	132.380	97.0	-3.0	NO	0.999	NO	bb

**Compound name: PFTeDA**

Coefficient of Determination: R<sup>2</sup> = 0.999345

Calibration curve: 1.30079 \* x

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	0.250	5.74	301.320	9476.007	0.318	0.2	-2.2	NO	0.999	NO	bb
2	2 181024G1_3	Standard	0.500	5.74	632.771	9139.188	0.692	0.5	6.5	NO	0.999	NO	bb
3	3 181024G1_4	Standard	1.000	5.74	1222.039	8157.577	1.498	1.2	15.2	NO	0.999	NO	bd
4	4 181024G1_5	Standard	2.000	5.73	2427.931	8937.765	2.716	2.1	4.4	NO	0.999	NO	bb
5	5 181024G1_6	Standard	5.000	5.73	6400.454	8986.205	7.123	5.5	9.5	NO	0.999	NO	bd
6	6 181024G1_7	Standard	10.000	5.74	10932.685	8745.664	12.501	9.6	-3.9	NO	0.999	NO	bd
7	7 181024G1_8	Standard	25.000	5.73	28344.002	8313.215	34.095	26.2	4.8	NO	0.999	NO	bb
8	8 181024G1_9	Standard	50.000	5.73	54937.141	8410.053	65.323	50.2	0.4	NO	0.999	NO	bd
9	9 181024G1_10	Standard	75.000	5.73	75026.844	7774.175	96.508	74.2	-1.1	NO	0.999	NO	bb
10	10 181024G1_11	Standard	100.000	5.73	106376.414	8258.241	128.812	99.0	-1.0	NO	0.999	NO	bb

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Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:27:15 Pacific Daylight Time

**Compound name: 13C2-PFHxA**

Response Factor: 0.896583

RRF SD: 0.046338, Relative SD: 5.16829

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	10.000	3.28	7579.743	9476.007	7.999	8.9	-10.8	NO		NO	bb
2	2 181024G1_3	Standard	10.000	3.28	8400.761	9139.188	9.192	10.3	2.5	NO		NO	bb
3	3 181024G1_4	Standard	10.000	3.28	7642.177	8157.577	9.368	10.4	4.5	NO		NO	bb
4	4 181024G1_5	Standard	10.000	3.28	7587.374	8937.765	8.489	9.5	-5.3	NO		NO	bb
5	5 181024G1_6	Standard	10.000	3.28	7698.983	8986.205	8.568	9.6	-4.4	NO		NO	bb
6	6 181024G1_7	Standard	10.000	3.28	8043.019	8745.664	9.197	10.3	2.6	NO		NO	bd
7	7 181024G1_8	Standard	10.000	3.28	7670.849	8313.215	9.227	10.3	2.9	NO		NO	bd
8	8 181024G1_9	Standard	10.000	3.28	7650.703	8410.053	9.097	10.1	1.5	NO		NO	bb
9	9 181024G1_10	Standard	10.000	3.28	7360.447	7774.175	9.468	10.6	5.6	NO		NO	bb
10	10 181024G1_11	Standard	10.000	3.28	7476.812	8258.241	9.054	10.1	1.0	NO		NO	bb

**Compound name: 13C2-PFDA**

Response Factor: 1.15998

RRF SD: 0.0762066, Relative SD: 6.56964

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	10.000	4.89	9786.636	9476.007	10.328	8.9	-11.0	NO		NO	bb
2	2 181024G1_3	Standard	10.000	4.89	11206.142	9139.188	12.262	10.6	5.7	NO		NO	bd
3	3 181024G1_4	Standard	10.000	4.89	10733.998	8157.577	13.158	11.3	13.4	NO		NO	bb
4	4 181024G1_5	Standard	10.000	4.89	9808.306	8937.765	10.974	9.5	-5.4	NO		NO	bd
5	5 181024G1_6	Standard	10.000	4.88	10596.607	8986.205	11.792	10.2	1.7	NO		NO	bd
6	6 181024G1_7	Standard	10.000	4.89	9979.326	8745.664	11.411	9.8	-1.6	NO		NO	bd
7	7 181024G1_8	Standard	10.000	4.89	9326.240	8313.215	11.219	9.7	-3.3	NO		NO	bb
8	8 181024G1_9	Standard	10.000	4.88	9807.799	8410.053	11.662	10.1	0.5	NO		NO	bb
9	9 181024G1_10	Standard	10.000	4.89	9212.083	7774.175	11.850	10.2	2.2	NO		NO	bb
10	10 181024G1_11	Standard	10.000	4.89	9367.672	8258.241	11.343	9.8	-2.2	NO		NO	bb

Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
 Printed: Friday, October 26, 2018 10:27:15 Pacific Daylight Time

**Compound name: d5-N-EtFOSAA**

Response Factor: 0.871704

RRF SD: 0.0492123, Relative SD: 5.64553

Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	40.000	5.09	17213.758	20688.383	33.282	38.2	-4.5	NO		NO	bd
2	2 181024G1_3	Standard	40.000	5.09	17217.670	18979.391	36.287	41.6	4.1	NO		NO	bd
3	3 181024G1_4	Standard	40.000	5.10	16179.126	17678.178	36.608	42.0	5.0	NO		NO	bd
4	4 181024G1_5	Standard	40.000	5.10	18662.379	19930.213	37.455	43.0	7.4	NO		NO	bd
5	5 181024G1_6	Standard	40.000	5.10	18093.926	19914.217	36.344	41.7	4.2	NO		NO	bb
6	6 181024G1_7	Standard	40.000	5.10	16419.465	17850.156	36.794	42.2	5.5	NO		NO	bd
7	7 181024G1_8	Standard	40.000	5.10	15845.644	19072.102	33.233	38.1	-4.7	NO		NO	bd
8	8 181024G1_9	Standard	40.000	5.11	15660.020	18887.098	33.166	38.0	-4.9	NO		NO	bb
9	9 181024G1_10	Standard	40.000	5.11	14912.827	18018.045	33.106	38.0	-5.1	NO		NO	bd
10	10 181024G1_11	Standard	40.000	5.11	14403.941	17779.283	32.406	37.2	-7.1	NO		NO	bd

**Compound name: 13C2-PFOA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

	# Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	10.000	4.22	9476.007	9476.007	10.000	10.0	0.0	NO		NO	MM
2	2 181024G1_3	Standard	10.000	4.21	9139.188	9139.188	10.000	10.0	0.0	NO		NO	bb
3	3 181024G1_4	Standard	10.000	4.21	8157.577	8157.577	10.000	10.0	0.0	NO		NO	MM
4	4 181024G1_5	Standard	10.000	4.21	8937.765	8937.765	10.000	10.0	0.0	NO		NO	bd
5	5 181024G1_6	Standard	10.000	4.21	8986.205	8986.205	10.000	10.0	0.0	NO		NO	bd
6	6 181024G1_7	Standard	10.000	4.21	8745.664	8745.664	10.000	10.0	0.0	NO		NO	bb
7	7 181024G1_8	Standard	10.000	4.21	8313.215	8313.215	10.000	10.0	0.0	NO		NO	bd
8	8 181024G1_9	Standard	10.000	4.21	8410.053	8410.053	10.000	10.0	0.0	NO		NO	bd
9	9 181024G1_10	Standard	10.000	4.20	7774.175	7774.175	10.000	10.0	0.0	NO		NO	MM
10	10 181024G1_11	Standard	10.000	4.21	8258.241	8258.241	10.000	10.0	0.0	NO		NO	bd

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Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

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**Compound name: 13C4-PFOS**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	28.700	4.63	12646.237	12646.237	28.700	28.7	0.0	NO		NO	bd
2	2 181024G1_3	Standard	28.700	4.62	13916.652	13916.652	28.700	28.7	0.0	NO		NO	bd
3	3 181024G1_4	Standard	28.700	4.62	14276.745	14276.745	28.700	28.7	0.0	NO		NO	MM
4	4 181024G1_5	Standard	28.700	4.62	12860.014	12860.014	28.700	28.7	0.0	NO		NO	bd
5	5 181024G1_6	Standard	28.700	4.62	12523.408	12523.408	28.700	28.7	0.0	NO		NO	bd
6	6 181024G1_7	Standard	28.700	4.63	13499.237	13499.237	28.700	28.7	0.0	NO		NO	bb
7	7 181024G1_8	Standard	28.700	4.62	12678.938	12678.938	28.700	28.7	0.0	NO		NO	bd
8	8 181024G1_9	Standard	28.700	4.63	12198.026	12198.026	28.700	28.7	0.0	NO		NO	bd
9	9 181024G1_10	Standard	28.700	4.63	12084.720	12084.720	28.700	28.7	0.0	NO		NO	bb
10	10 181024G1_11	Standard	28.700	4.63	12611.543	12611.543	28.700	28.7	0.0	NO		NO	bd

**Compound name: d3-N-MeFOSAA**

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )

Curve type: RF

#	Name	Type	Std. Conc	RT	Area	IS Area	Response	Conc.	%Dev	Conc. Flag	CoD	CoD Flag	x=excluded
1	1 181024G1_2	Standard	40.000	4.99	20688.383	20688.383	40.000	40.0	0.0	NO		NO	bd
2	2 181024G1_3	Standard	40.000	4.99	18979.391	18979.391	40.000	40.0	0.0	NO		NO	bd
3	3 181024G1_4	Standard	40.000	4.99	17678.178	17678.178	40.000	40.0	0.0	NO		NO	bd
4	4 181024G1_5	Standard	40.000	4.99	19930.213	19930.213	40.000	40.0	0.0	NO		NO	bb
5	5 181024G1_6	Standard	40.000	5.00	19914.217	19914.217	40.000	40.0	0.0	NO		NO	bd
6	6 181024G1_7	Standard	40.000	4.99	17850.156	17850.156	40.000	40.0	0.0	NO		NO	bb
7	7 181024G1_8	Standard	40.000	5.00	19072.102	19072.102	40.000	40.0	0.0	NO		NO	bd
8	8 181024G1_9	Standard	40.000	5.00	18887.098	18887.098	40.000	40.0	0.0	NO		NO	bd
9	9 181024G1_10	Standard	40.000	5.00	18018.045	18018.045	40.000	40.0	0.0	NO		NO	bd
10	10 181024G1_11	Standard	40.000	5.00	17779.283	17779.283	40.000	40.0	0.0	NO		NO	bd

Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:31:32 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1024.mdb 26 Oct 2018 10:20:09  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 10:23:39

Name: 181024G1\_2, Date: 24-Oct-2018, Time: 12:36:01, ID: ST181024G1-1 PFC CS-4 537 18J1829, Description: PFC CS-1 537 18J1829

#	Name	IS#	CoD	CoD Flag	%RSD
1	1 PFBS	19	0.9988	NO	
2	2 PFHxA	18	0.9986	NO	
3	3 PFHpA	18	0.9993	NO	
4	4 PFHxS	19	0.9988	NO	
5	5 PFOA	18	0.9984	NO	
6	6 PFNA	18	0.9983	NO	
7	7 PFOS	19	0.9986	NO	
8	8 PFDA	18	0.9991	NO	
9	9 N-MeFOSAA	20	0.9985	NO	
10	10 N-EtFOSAA	20	0.9973	NO	
11	11 PFUnA	18	0.9985	NO	
12	12 PFDoA	18	0.9987	NO	
13	13 PFTrDA	18	0.9987	NO	
14	14 PFTeDA	18	0.9993	NO	
15	15 13C2-PFHxA	18		NO	5.168
16	16 13C2-PFDA	18		NO	6.570
17	17 d5-N-EtFOSAA	20		NO	5.646
18	18 13C2-PFOA	18		NO	0.000
19	19 13C4-PFOS	19		NO	0.000
20	20 d3-N-MeFOSAA	20		NO	0.000

ICAL

<b>Compound 18: 13C2-PFOA</b>	high	9476.01 RPD
	low	7774.18 19.73

ID	Name	Type	Std. Conc	RT	Area	IS Area	Response	Primary Flags
1 ST181024G1-1 PFC CS-4 537 18J1829	181024G1_2	Standard	10.0		4.22 9476.01	9537.61	10.0	bd
2 ST181024G1-2 PFC CS-3 537 18J1830	181024G1_3	Standard	10.0		4.21 9139.19	9139.19	10.0	bb
3 ST181024G1-3 PFC CS-2 537 18J1831	181024G1_4	Standard	10.0		4.21 8128.33	8128.33	10.0	bb
4 ST181024G1-4 PFC CS-1 537 18J1832	181024G1_5	Standard	10.0		4.21 8937.77	8937.77	10.0	bd
5 ST181024G1-5 PFC CS0 537 18J1833	181024G1_6	Standard	10.0		4.21 8986.21	8986.21	10.0	bd
6 ST181024G1-6 PFC CS1 537 18J1834	181024G1_7	Standard	10.0		4.21 8745.66	8745.66	10.0	bb
7 ST181024G1-7 PFC CS2 537 18J1835	181024G1_8	Standard	10.0		4.21 8313.22	8313.22	10.0	bd
8 ST181024G1-8 PFC CS3 537 18J1836	181024G1_9	Standard	10.0		4.21 8410.05	8410.05	10.0	bd
9 ST181024G1-9 PFC CS4 537 18J1837	181024G1_10	Standard	10.0		4.20 7774.18	7759.32	10.0	bd
10 ST181024G1-10 PFC CS5 537 18J1838	181024G1_11	Standard	10.0		4.21 8258.24	8258.24	10.0	bd
<b>AVG</b>						<b>8621.56</b>		

<b>Compound 19: 13C4-PFOS</b>	high	13916.65 RPD
	low	12084.72 14.09

ID	Name	Type	Std. Conc	RT	Area	IS Area	Response	Primary Flags
1 ST181024G1-1 PFC CS-4 537 18J1829	181024G1_2	Standard	28.7		4.63 12646.24	12646.24	28.7	bd
2 ST181024G1-2 PFC CS-3 537 18J1830	181024G1_3	Standard	28.7		4.62 13916.65	13916.65	28.7	bd
3 ST181024G1-3 PFC CS-2 537 18J1831	181024G1_4	Standard	28.7		4.62 14343.27	14343.27	28.7	MM
4 ST181024G1-4 PFC CS-1 537 18J1832	181024G1_5	Standard	28.7		4.62 12860.01	12860.01	28.7	bd
5 ST181024G1-5 PFC CS0 537 18J1833	181024G1_6	Standard	28.7		4.62 12523.41	12523.41	28.7	bd
6 ST181024G1-6 PFC CS1 537 18J1834	181024G1_7	Standard	28.7		4.63 13499.24	13499.24	28.7	bb
7 ST181024G1-7 PFC CS2 537 18J1835	181024G1_8	Standard	28.7		4.62 12678.94	12678.94	28.7	bd
8 ST181024G1-8 PFC CS3 537 18J1836	181024G1_9	Standard	28.7		4.63 12198.03	12198.03	28.7	bd
9 ST181024G1-9 PFC CS4 537 18J1837	181024G1_10	Standard	28.7		4.63 12084.72	12084.72	28.7	bb
10 ST181024G1-10 PFC CS5 537 18J1838	181024G1_11	Standard	28.7		4.63 12611.54	12611.54	28.7	bd
<b>AVG</b>						<b>12936.20</b>		

**Compound 20: d3-N-MeFOSAA**

high 20688.38 RPD  
low 17678.18 15.69

ID	Name	Type	Std. Conc	RT	Area	IS Area	Response	Primary Flags
1	ST181024G1-1 PFC CS-4 537 18J1829	181024G1_2	Standard	40.0	4.99	20688.38	20688.38	40.0 bd
2	ST181024G1-2 PFC CS-3 537 18J1830	181024G1_3	Standard	40.0	4.99	18979.39	18979.39	40.0 bd
3	ST181024G1-3 PFC CS-2 537 18J1831	181024G1_4	Standard	40.0	4.99	17678.18	17678.18	40.0 bd
4	ST181024G1-4 PFC CS-1 537 18J1832	181024G1_5	Standard	40.0	4.99	19930.21	19930.21	40.0 bb
5	ST181024G1-5 PFC CS0 537 18J1833	181024G1_6	Standard	40.0	5.00	19914.22	19914.22	40.0 bd
6	ST181024G1-6 PFC CS1 537 18J1834	181024G1_7	Standard	40.0	4.99	17850.16	17850.16	40.0 bb
7	ST181024G1-7 PFC CS2 537 18J1835	181024G1_8	Standard	40.0	5.00	19072.10	19072.10	40.0 bd
8	ST181024G1-8 PFC CS3 537 18J1836	181024G1_9	Standard	40.0	5.00	18887.10	18887.10	40.0 bd
9	ST181024G1-9 PFC CS4 537 18J1837	181024G1_10	Standard	40.0	5.00	18018.05	18018.05	40.0 bd
10	ST181024G1-10 PFC CS5 537 18J1838	181024G1_11	Standard	40.0	5.00	17779.28	17779.28	40.0 bd
						<b>AVG</b>	<b>18879.71</b>	



PFBS

Std. Conc	RT	Area	S Area	Response	Primary Flags	Conc.	%Dev	Acq.D...	Acq.Ti...	Cal.Date	%Rec	RRF	Divisor1	Conc. Dev...
4.440	2.92	1914.692	12523.408	4.388	bb	5.0	13.2	24-Oct...	13:27:51	26/Oct...	113.2	0.988	1.0	NO

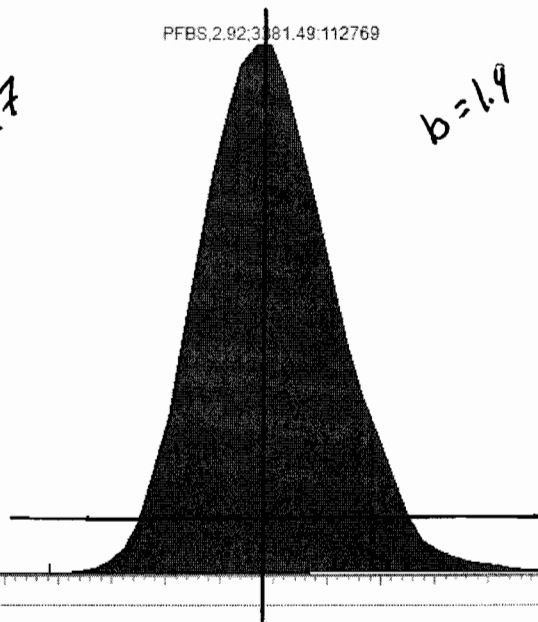
S1 537 18J1834

PFBS,2.92,3081.49:112769

$a = 1.7$

$b = 1.9$

$\frac{b}{a} = \frac{1.9}{1.7} = 1.12$



S1 537 18J1834

2.740 2.760 2.780 2.800 2.820 2.840 2.860 2.880 2.900 2.920 2.940 2.960 2.980 3.000 3.020 3.040 3.060 3.080 3.100





PFHxA

Conc	RT	Area	IS Area	Response	Primary Flags	Conc	%Dev	Acq.D...	Acq.Ti...	Cal.Date	%Rec	RRF	Divisor1	Conc. Dev....
5.000	3.28	4142.214	8986.205	4.610	bb	5.4	7.3	24-Oct...	13:27:51	26/Oct...	107.3	0.922	1.0	NO

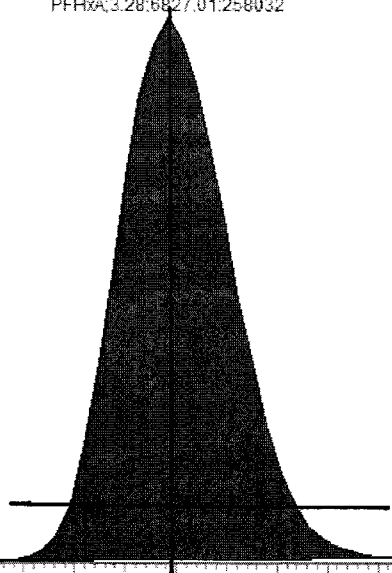
537 18J1834

PFHxA:3.28:6827.01:258032

$a = 1.4$

$b = 1.6$

$\frac{b}{a} = \frac{1.6}{1.4} = 1.14$



537 18J1834



Dataset: Untitled

Last Altered: Friday, October 26, 2018 10:32:37 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:32:56 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1024.mdb 26 Oct 2018 10:20:09

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 10:23:39

Compound name: PFBS

	# Name	ID	Acq.Date	Acq.Time
1	1 181024G1_1	IPA	24-Oct-18	12:23:56
2	2 181024G1_2	ST181024G1-1 PFC CS-4 537 18J1829	24-Oct-18	12:36:01
3	3 181024G1_3	ST181024G1-2 PFC CS-3 537 18J1830	24-Oct-18	12:49:00
4	4 181024G1_4	ST181024G1-3 PFC CS-2 537 18J1831	24-Oct-18	13:01:56
5	5 181024G1_5	ST181024G1-4 PFC CS-1 537 18J1832	24-Oct-18	13:14:53
6	6 181024G1_6	ST181024G1-5 PFC CS0 537 18J1833	24-Oct-18	13:27:51
7	7 181024G1_7	ST181024G1-6 PFC CS1 537 18J1834	24-Oct-18	13:40:48
8	8 181024G1_8	ST181024G1-7 PFC CS2 537 18J1835	24-Oct-18	13:53:46
9	9 181024G1_9	ST181024G1-8 PFC CS3 537 18J1836	24-Oct-18	14:06:51
10	10 181024G1_10	ST181024G1-9 PFC CS4 537 18J1837	24-Oct-18	14:19:50
11	11 181024G1_11	ST181024G1-10 PFC CS5 537 18J1838	24-Oct-18	14:32:50
12	12 181024G1_12	IPA	24-Oct-18	14:45:47
13	13 181024G1_13	ST181024G1-1 PFC ICV 537 18J1839	24-Oct-18	14:58:50
14	14 181024G1_14	IPA	24-Oct-18	15:11:42

181024G1 ICV NOT USED, SEE 181025G1

Dataset: Untitled

Last Altered: Friday, October 26, 2018 10:34:02 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:34:11 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1024.mdb 26 Oct 2018 10:20:09

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 10:23:39

Compound name: PFBS

	# Name	ID	Acq.Date	Acq.Time
1	1 181026G1_1	IPA	26-Oct-18	09:24:09
2	2 181026G1_2	ST181026G1-1 PFC ICV 537 18J1506	26-Oct-18	09:36:12

Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1024.mdb 26 Oct 2018 10:20:09

Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 10:23:39

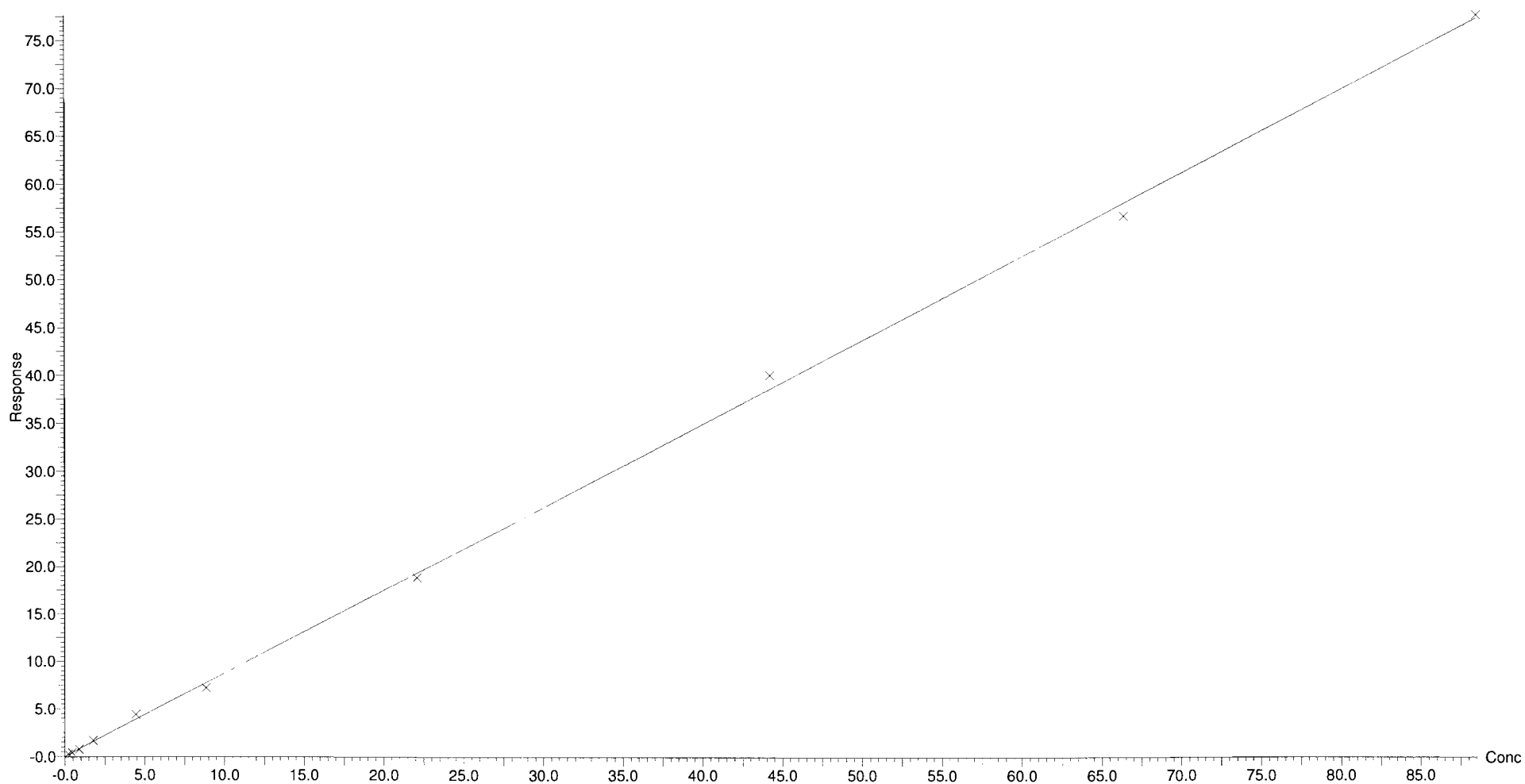
Compound name: PFBS

Coefficient of Determination:  $R^2 = 0.998838$

Calibration curve:  $0.873282 * x$

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

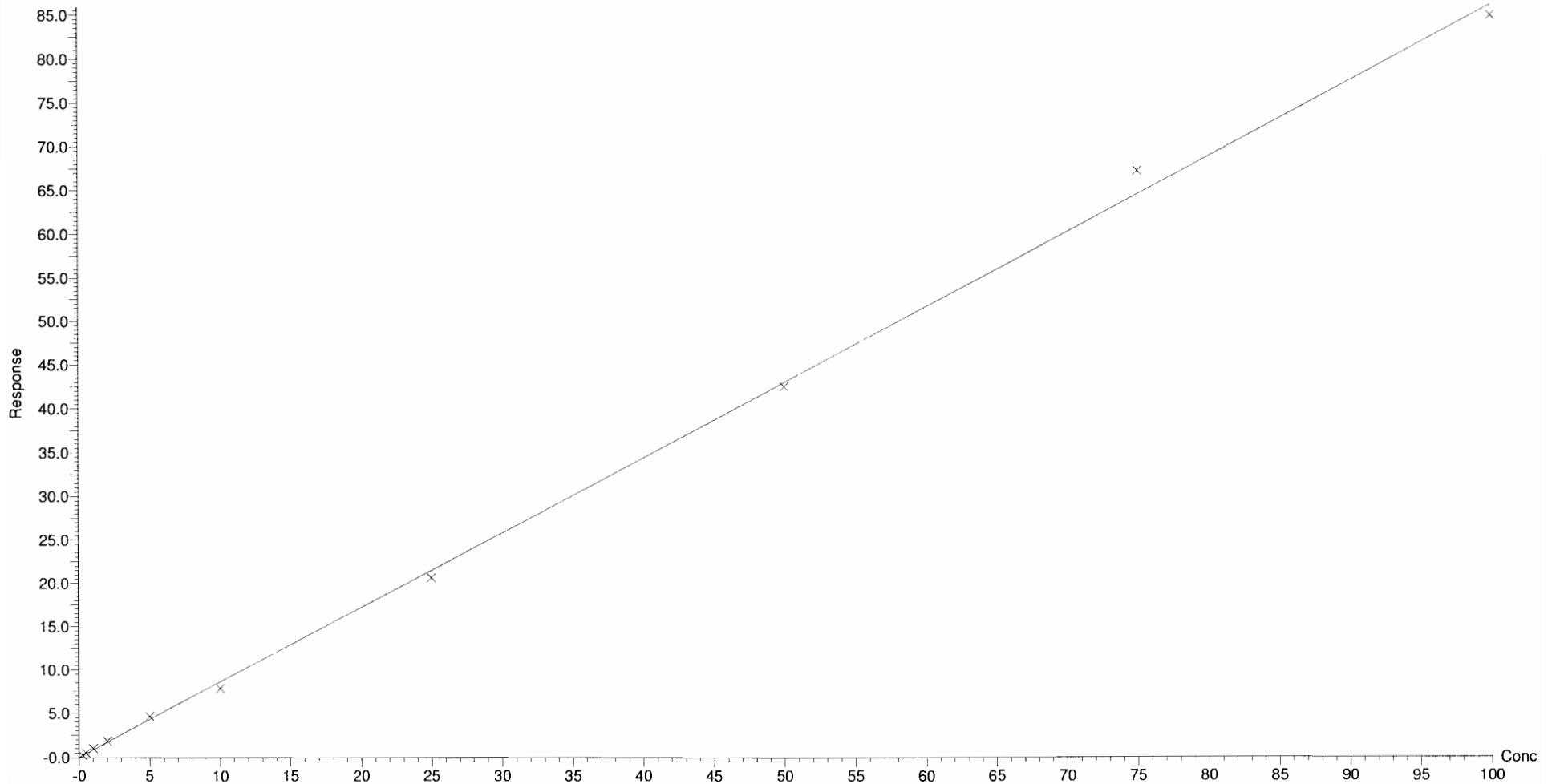
Compound name: PFHxA

Coefficient of Determination:  $R^2 = 0.998600$

Calibration curve:  $0.859305 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

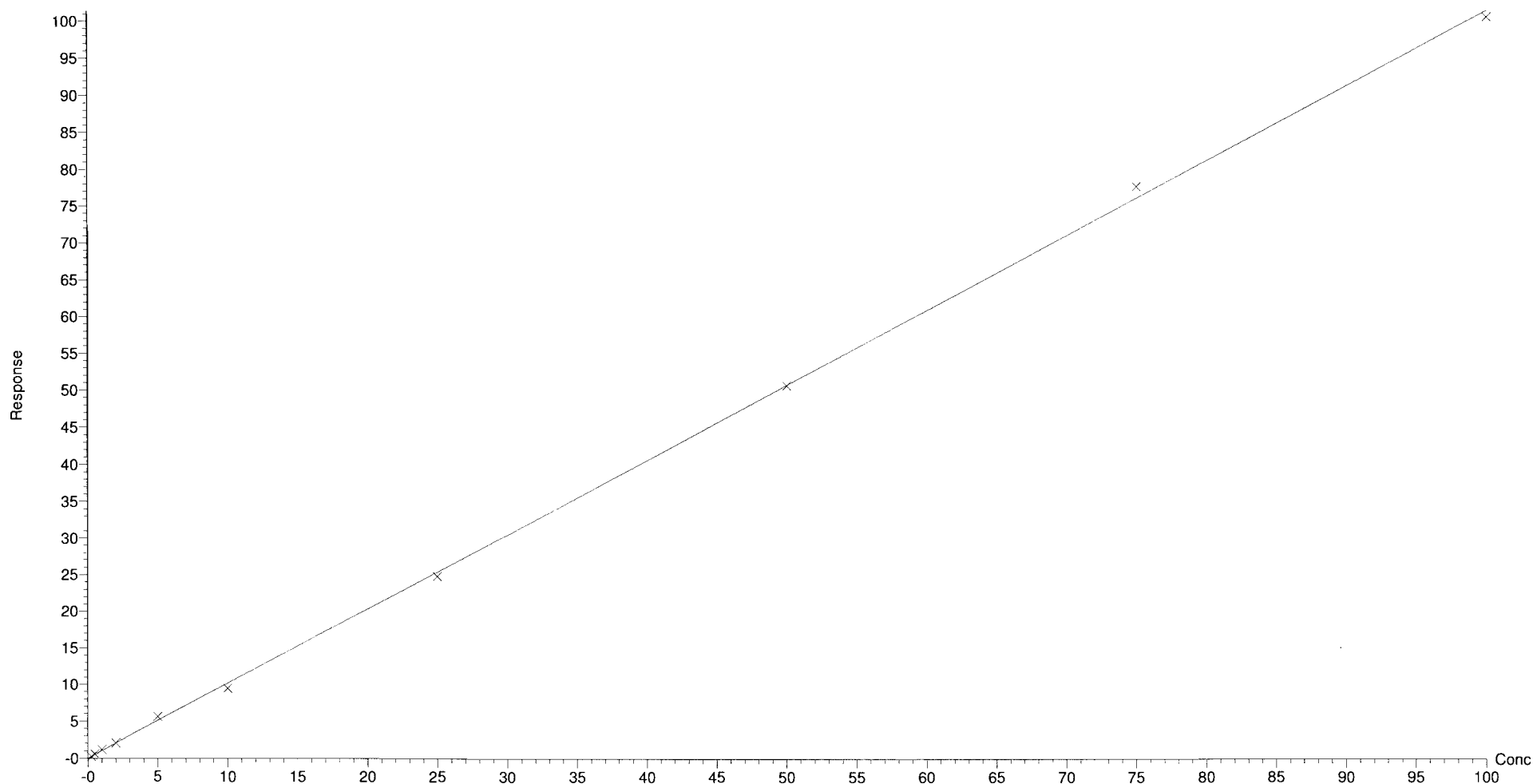
Compound name: PFHpA

Coefficient of Determination:  $R^2 = 0.999287$

Calibration curve:  $1.01436 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

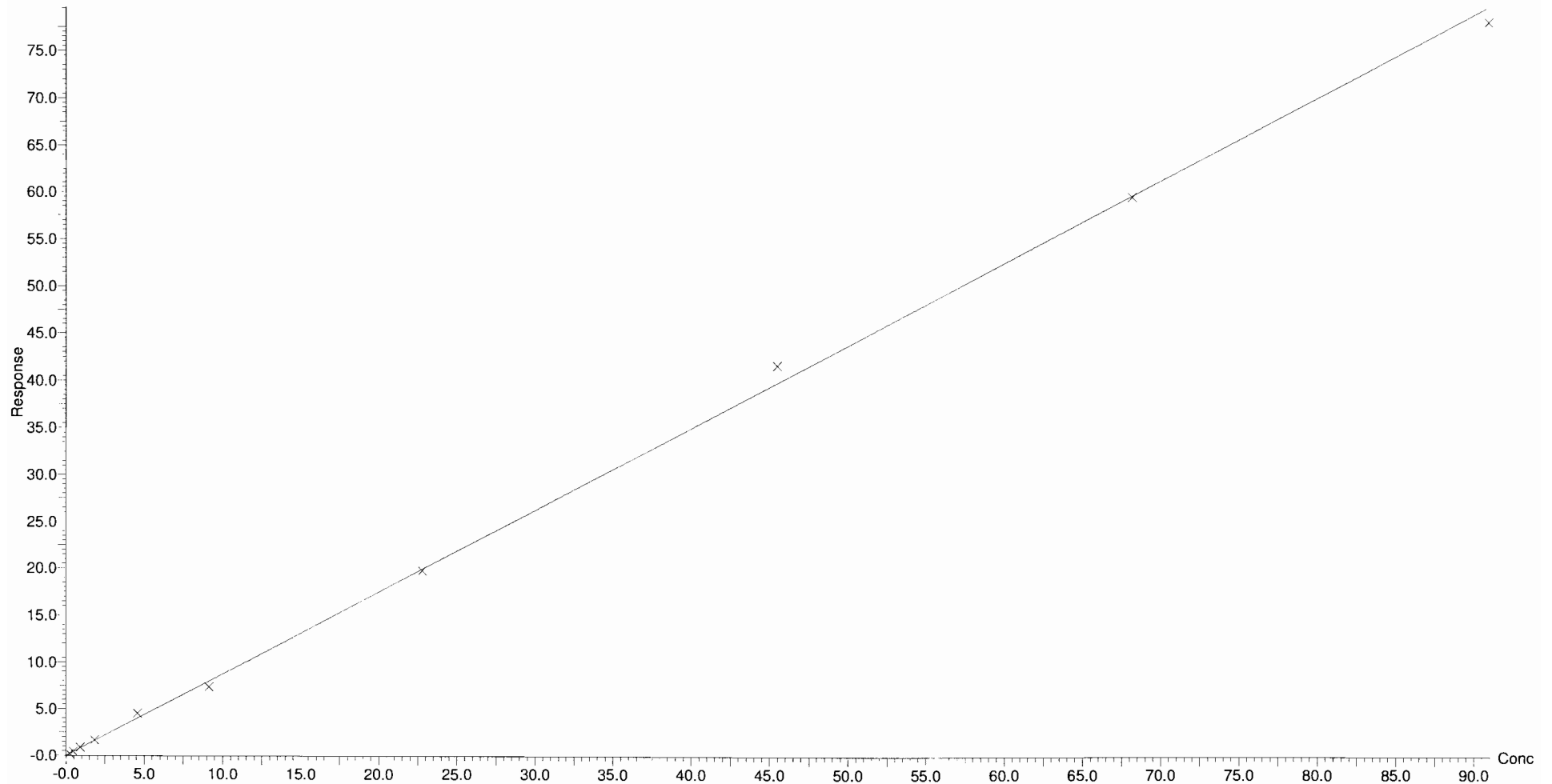
Compound name: PFHxS

Coefficient of Determination:  $R^2 = 0.998824$

Calibration curve:  $0.874359 * x$

Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

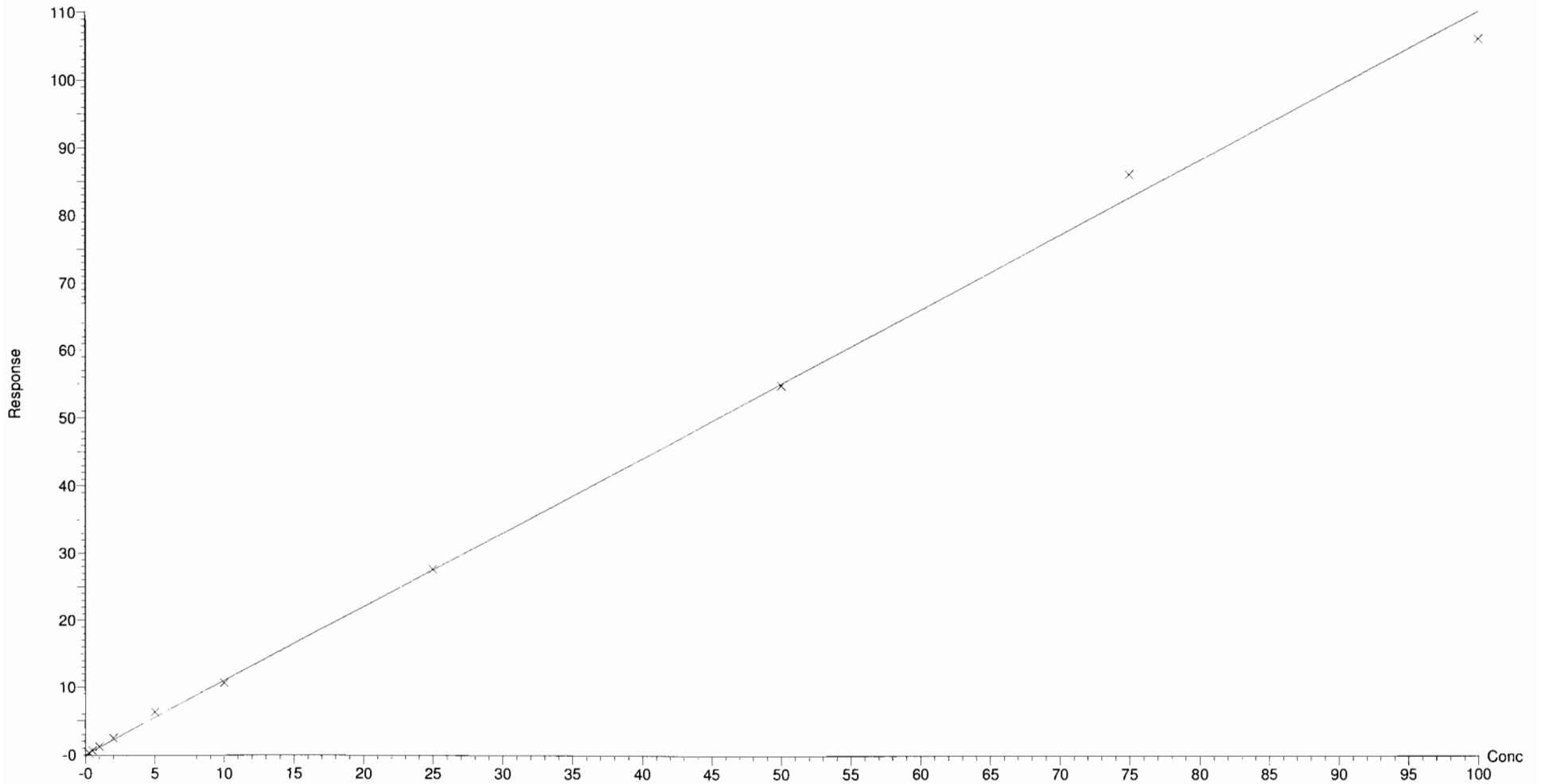
Compound name: PFOA

Coefficient of Determination:  $R^2 = 0.998403$

Calibration curve:  $1.10207 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

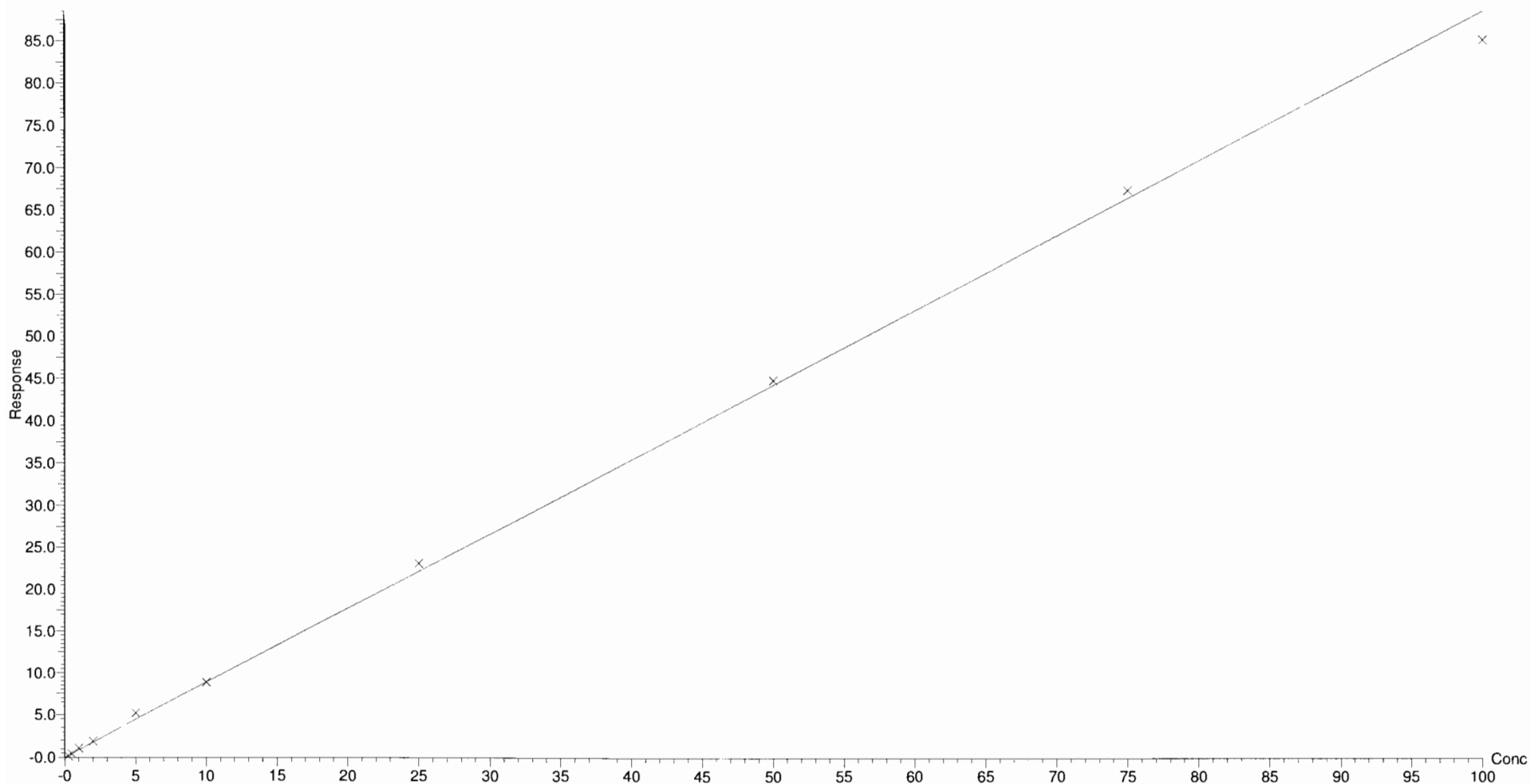
Compound name: PFNA

Coefficient of Determination:  $R^2 = 0.998293$

Calibration curve:  $0.885536 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

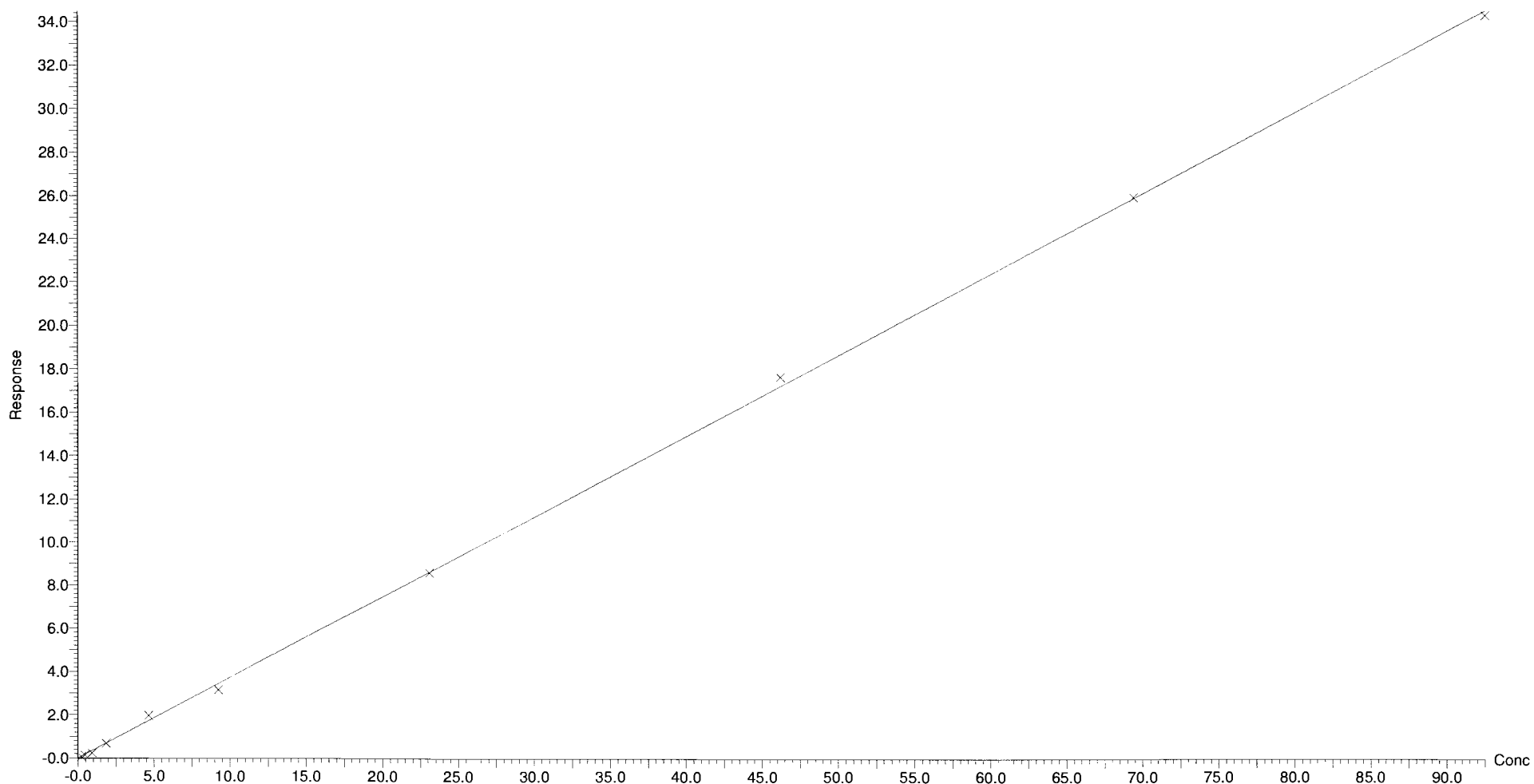
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

Compound name: PFOS  
Coefficient of Determination:  $R^2 = 0.998617$   
Calibration curve:  $0.372898 * x$   
Response type: Internal Std ( Ref 19 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

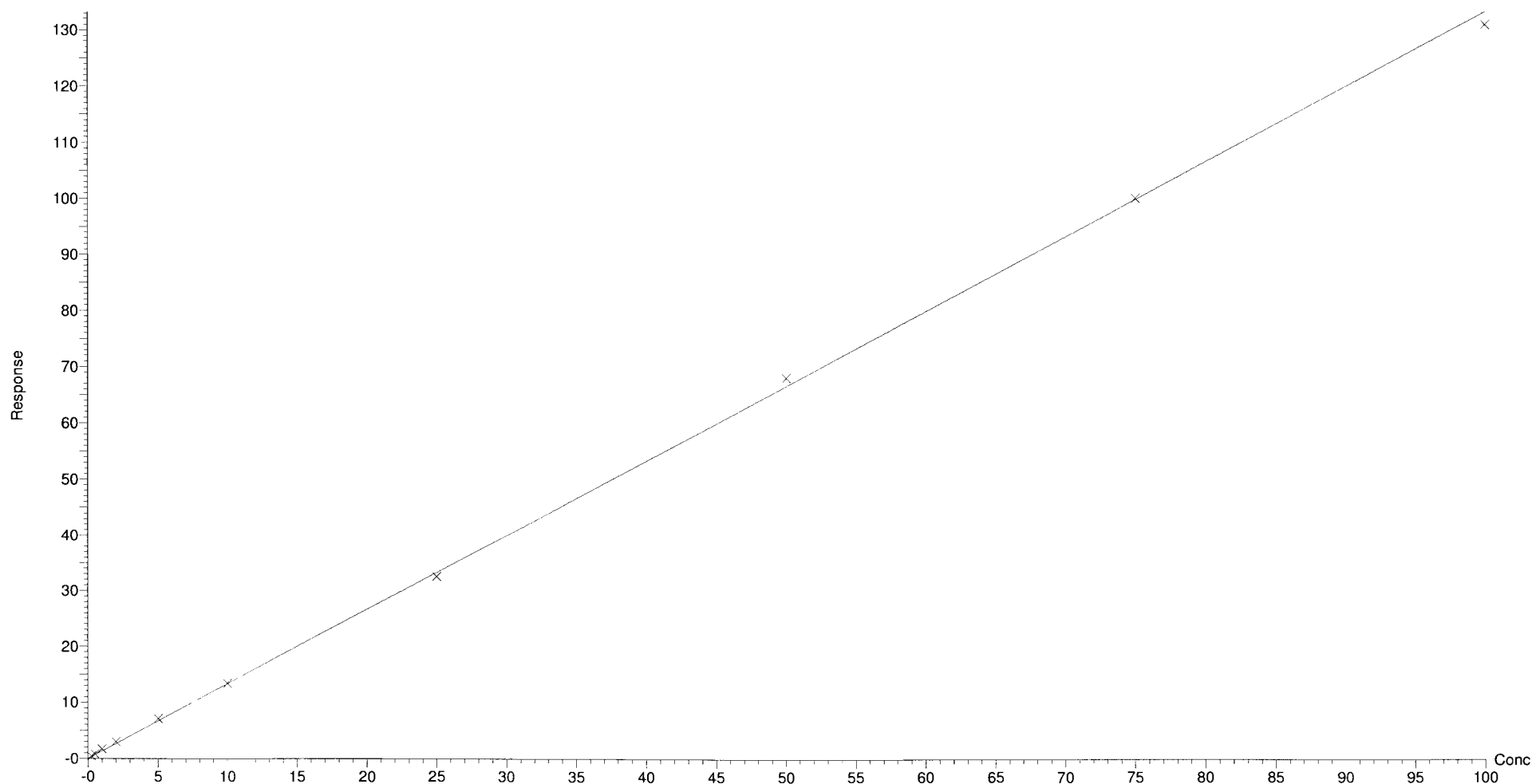
Compound name: PFDA

Coefficient of Determination:  $R^2 = 0.999129$

Calibration curve:  $1.33223 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

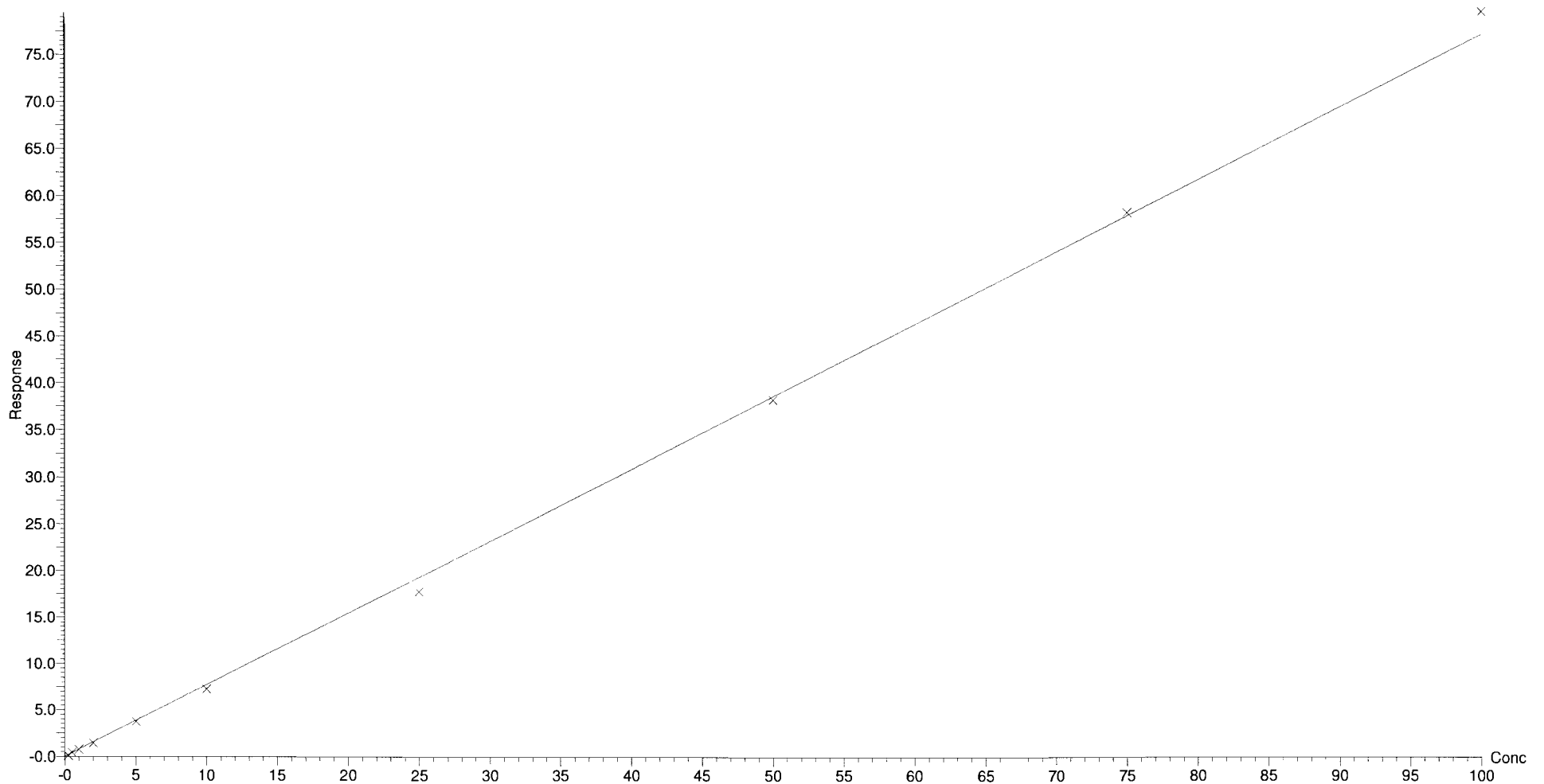
Compound name: N-MeFOSAA

Coefficient of Determination:  $R^2 = 0.998493$

Calibration curve:  $0.770406 * x$

Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )

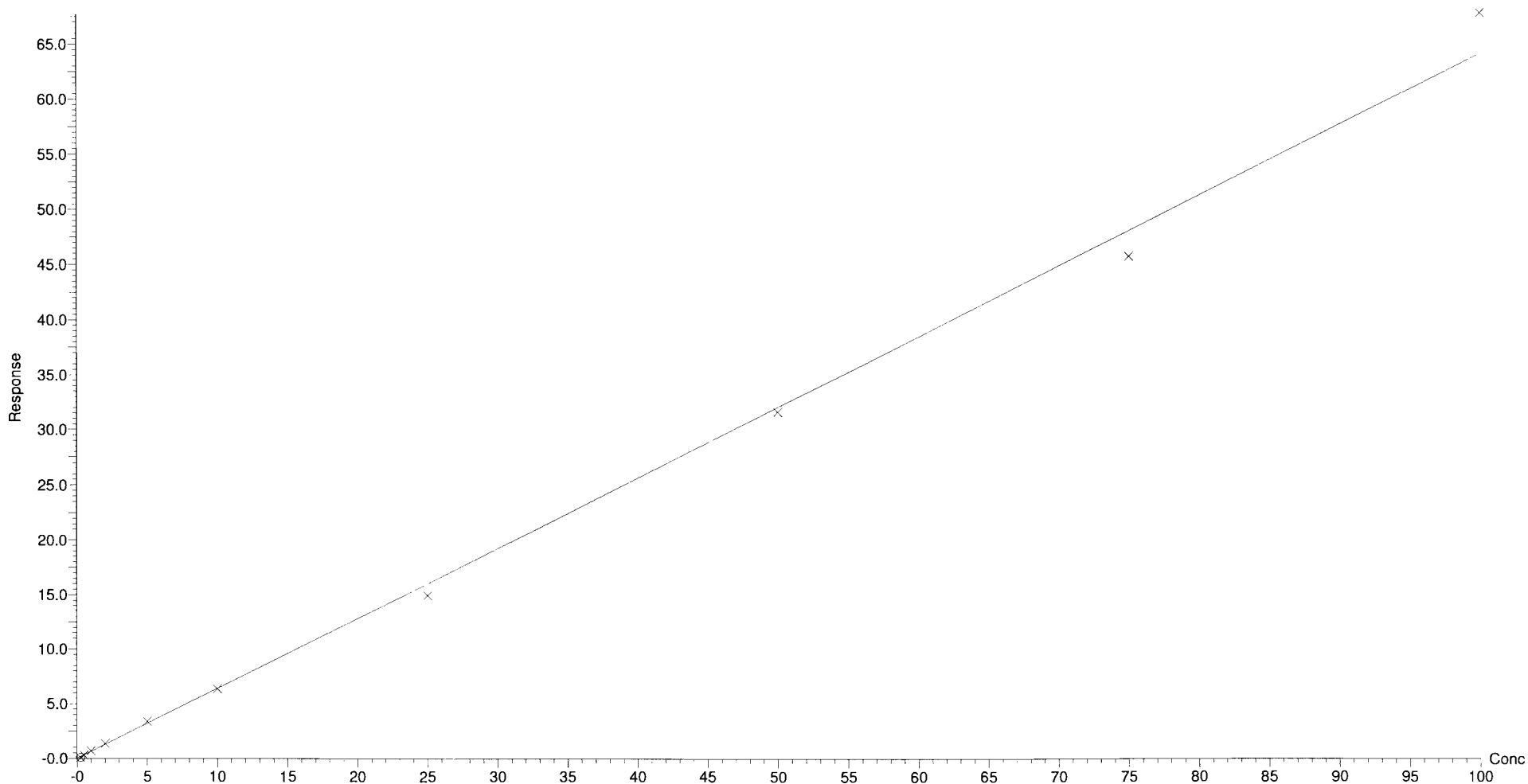
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

Compound name: N-EtFOSAA  
Coefficient of Determination:  $R^2 = 0.997312$   
Calibration curve:  $0.640535 * x$   
Response type: Internal Std ( Ref 20 ), Area \* ( IS Conc. / IS Area )  
Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

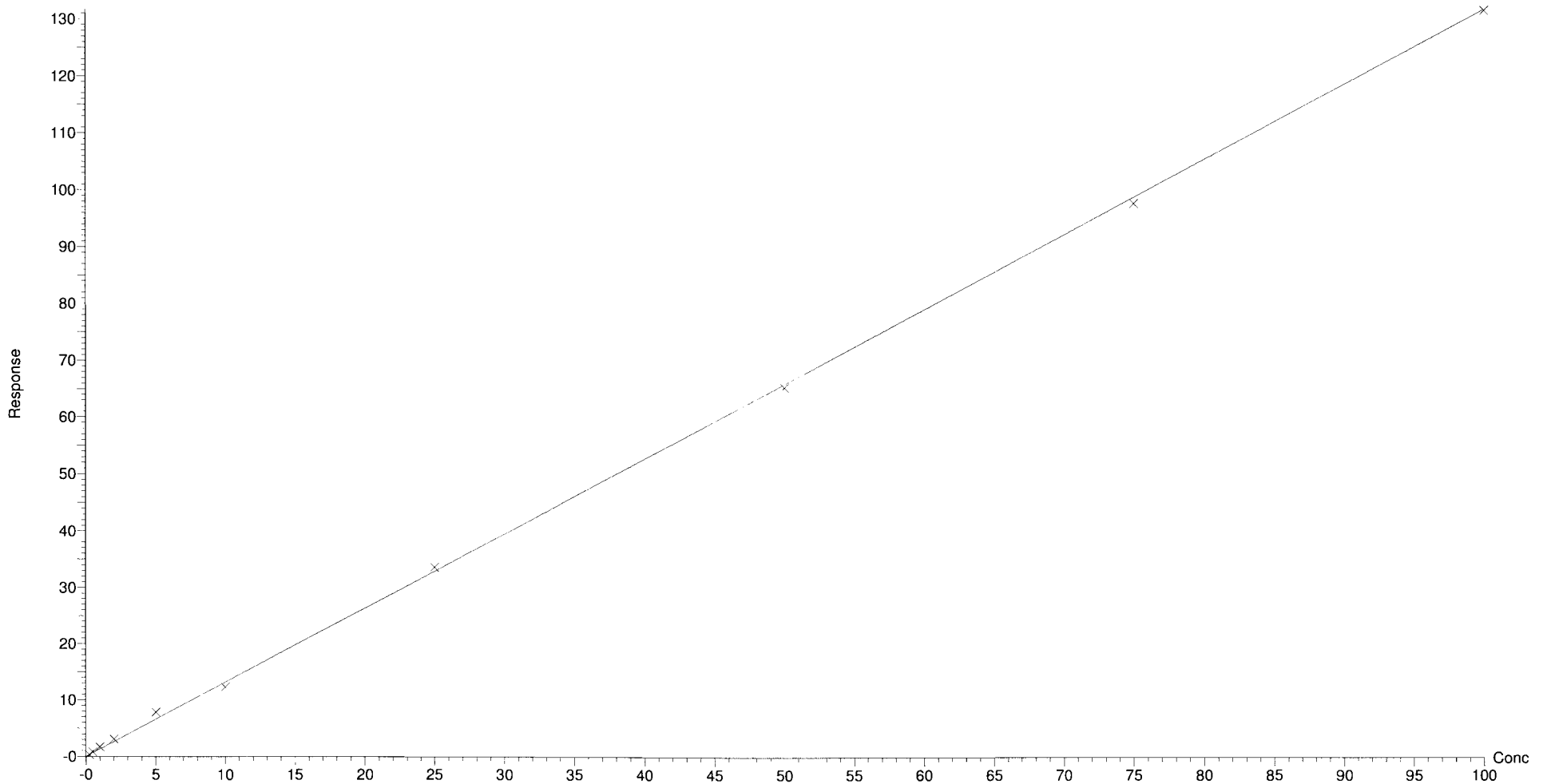
Compound name: PFUnA

Coefficient of Determination:  $R^2 = 0.998451$

Calibration curve:  $1.31676 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

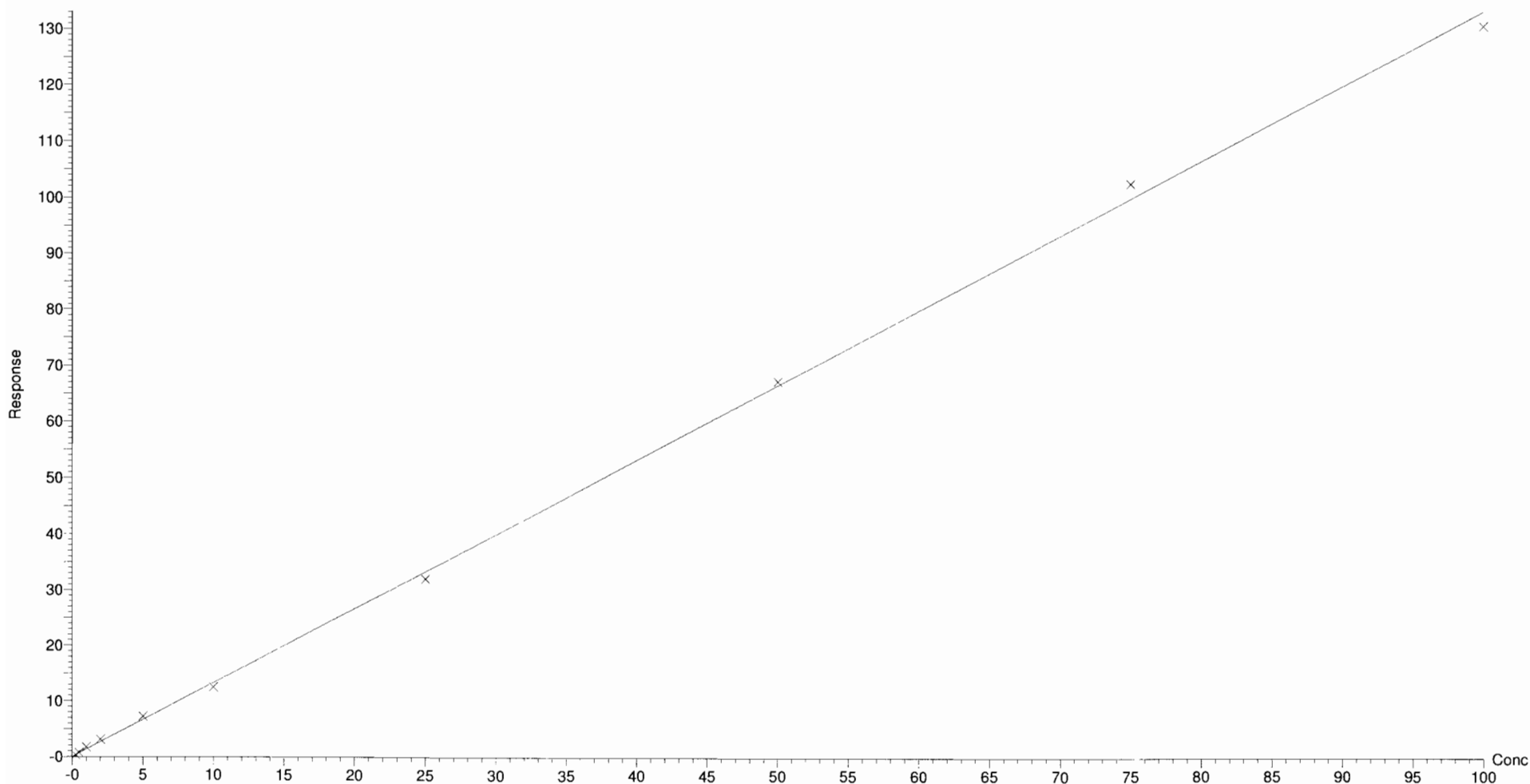
Compound name: PFDoA

Coefficient of Determination:  $R^2 = 0.998667$

Calibration curve:  $1.33132 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

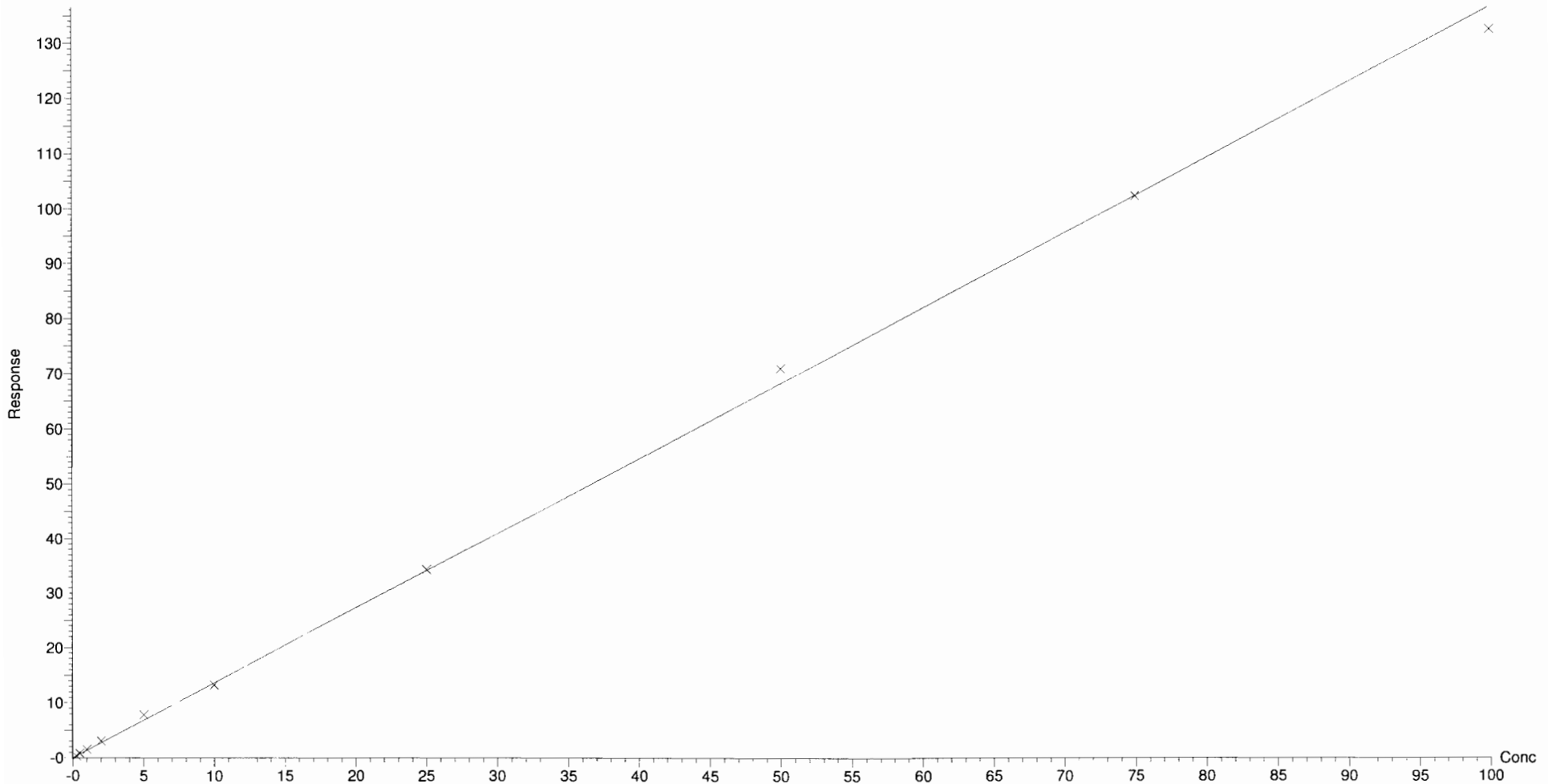
Compound name: PFTrDA

Coefficient of Determination:  $R^2 = 0.998707$

Calibration curve:  $1.36446 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None





Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:24:29 Pacific Daylight Time

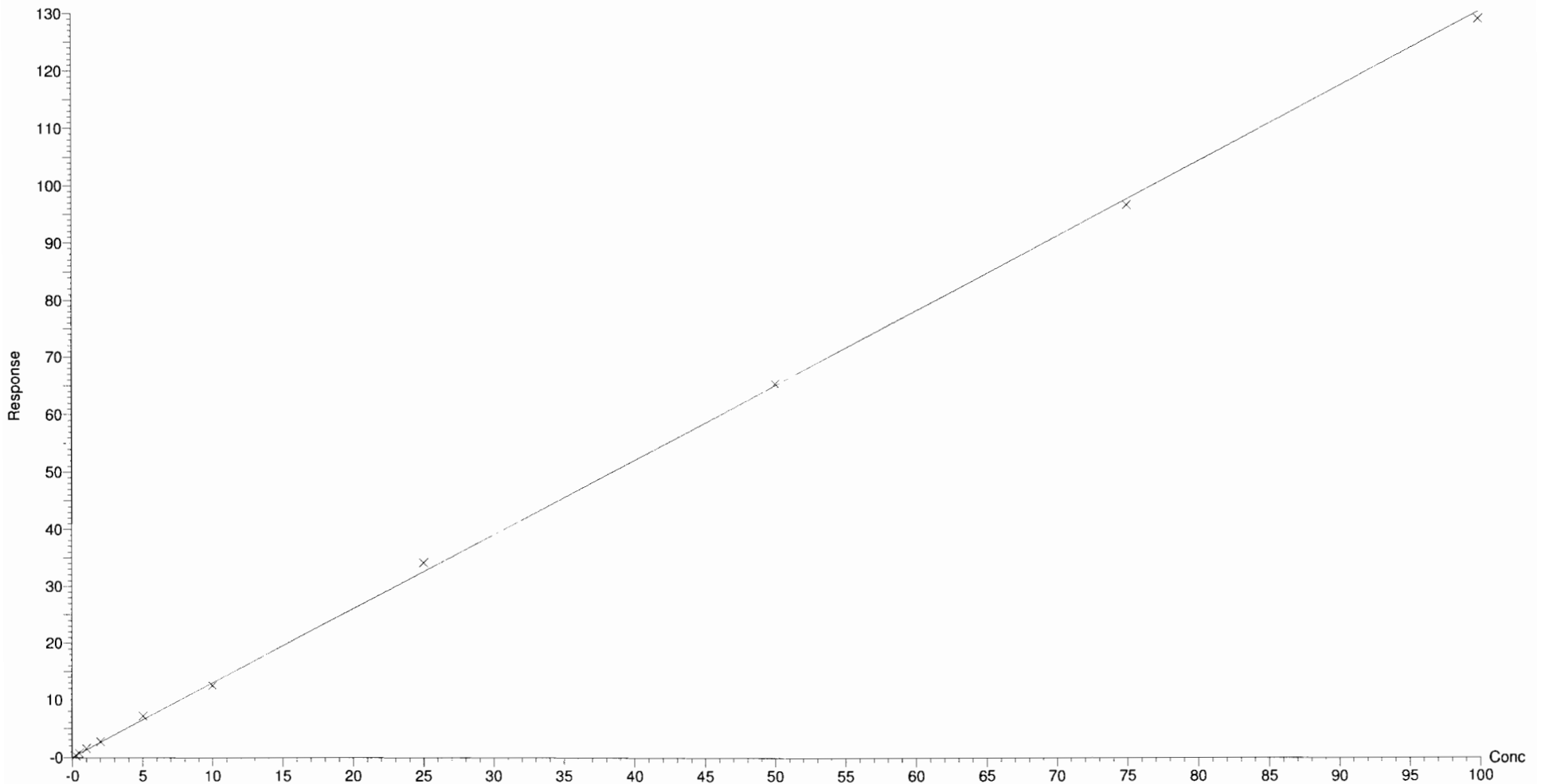
Compound name: PFTeDA

Coefficient of Determination:  $R^2 = 0.999345$

Calibration curve:  $1.30079 * x$

Response type: Internal Std ( Ref 18 ), Area \* ( IS Conc. / IS Area )

Curve type: Linear, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

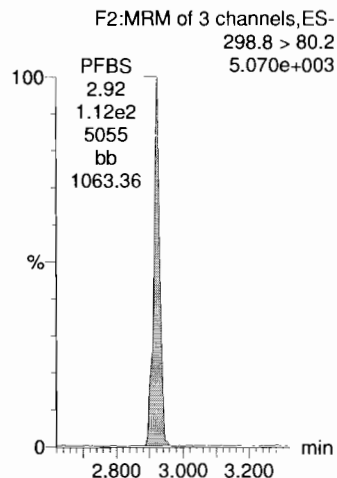
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1024.mdb 26 Oct 2018 10:20:09

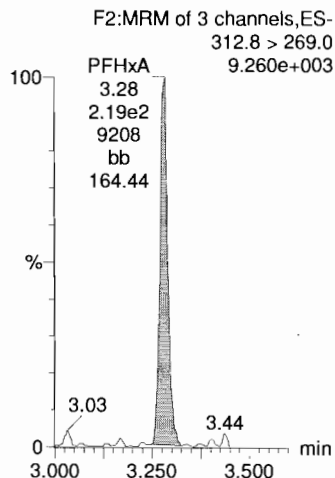
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 10:23:39

Name: 181024G1\_2, Date: 24-Oct-2018, Time: 12:36:01, ID: ST181024G1-1 PFC CS-4 537 18J1829, Description: PFC CS-1 537 18J1829

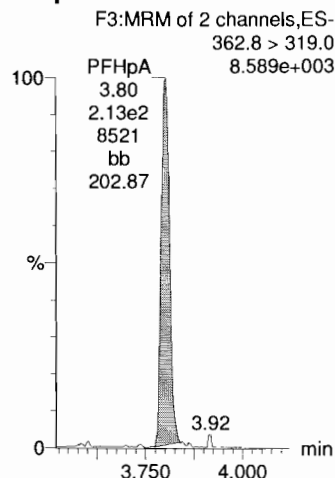
**PFBS**



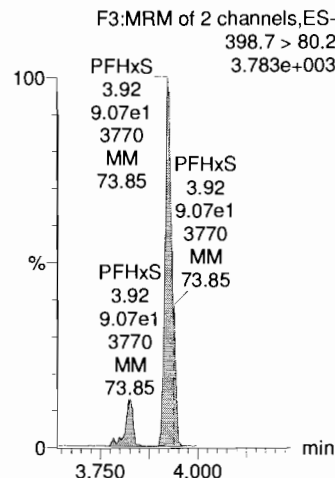
**PFHxA**



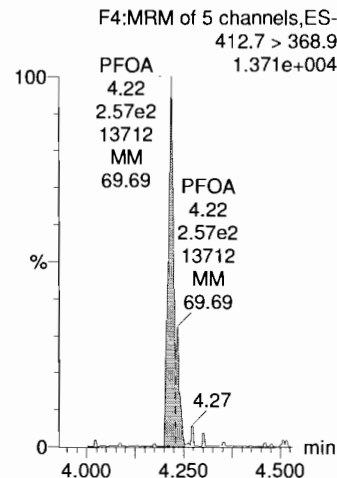
**PFHpA**



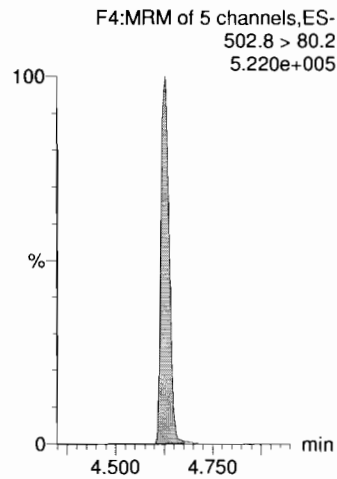
**PFHxS**



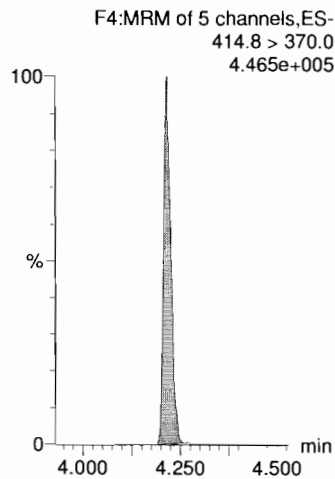
**PFOA**



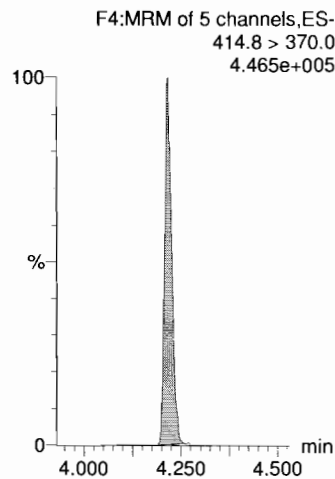
**13C4-PFOS**



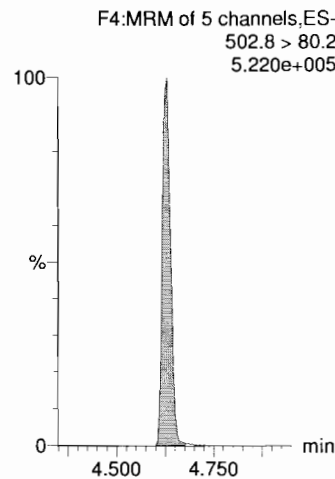
**13C2-PFOA**



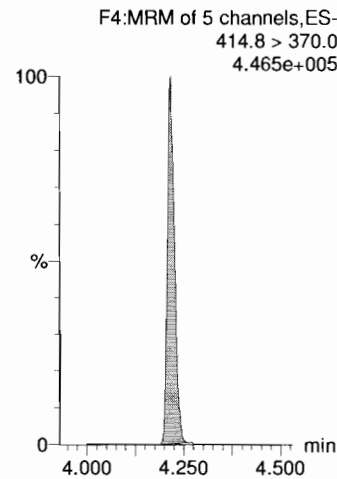
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

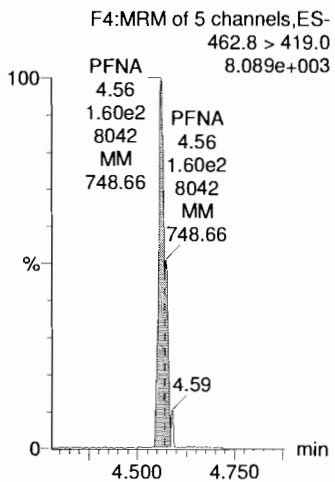


Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

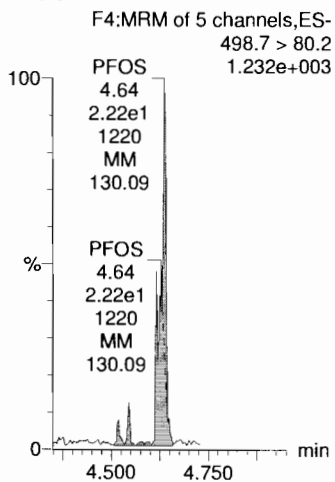
Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_2, Date: 24-Oct-2018, Time: 12:36:01, ID: ST181024G1-1 PFC CS-4 537 18J1829, Description: PFC CS-1 537 18J1829

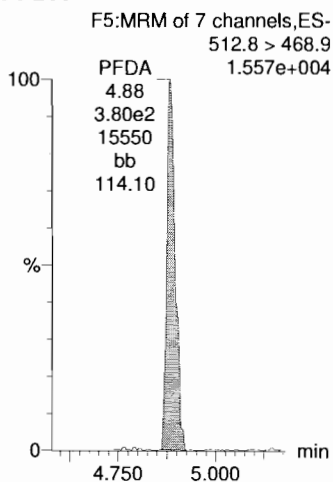
**PFNA**



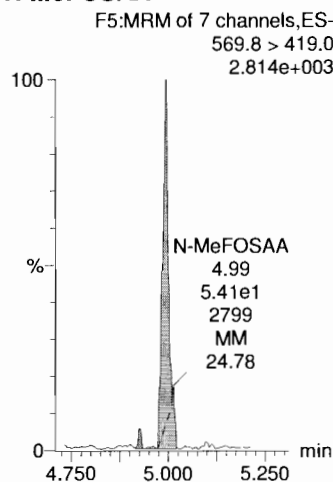
**PFOS**



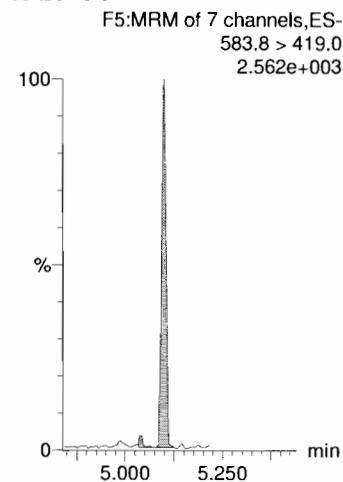
**PFDA**



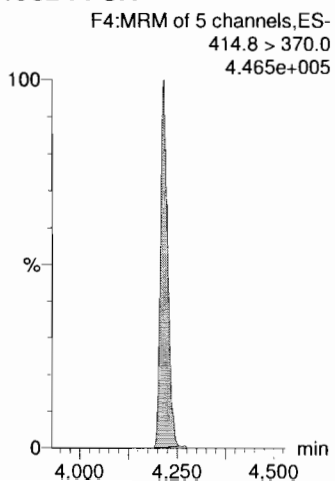
**N-MeFOSAA**



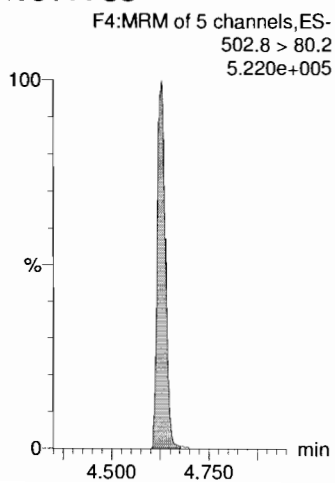
**N-EtFOSAA**



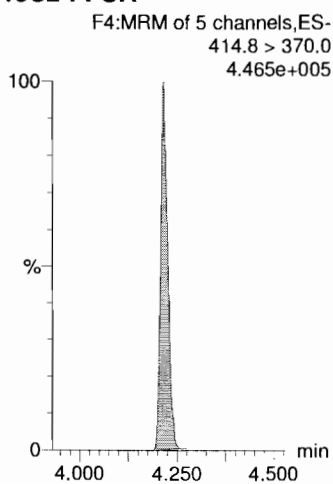
**13C2-PFOA**



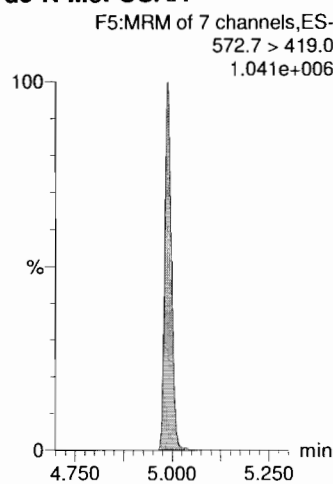
**13C4-PFOS**



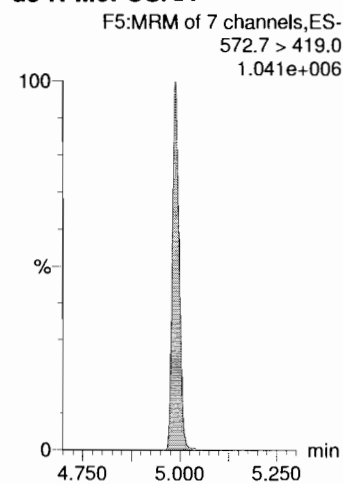
**13C2-PFOA**



**d3-N-MeFOSAA**



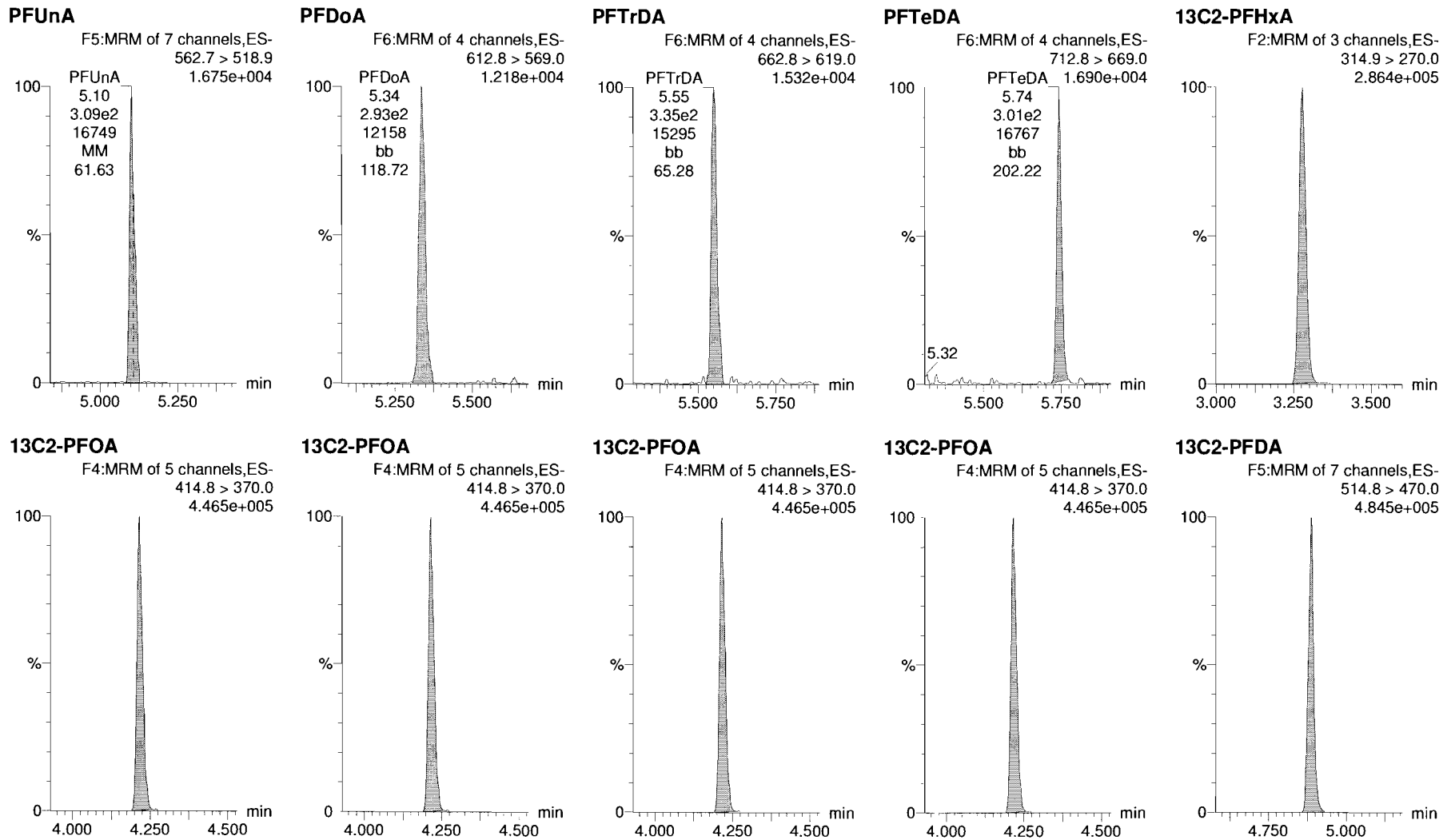
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_2, Date: 24-Oct-2018, Time: 12:36:01, ID: ST181024G1-1 PFC CS-4 537 18J1829, Description: PFC CS-1 537 18J1829



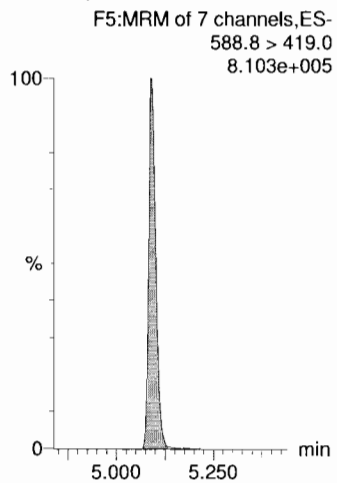
Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_2, Date: 24-Oct-2018, Time: 12:36:01, ID: ST181024G1-1 PFC CS-4 537 18J1829, Description: PFC CS-1 537 18J1829

**d5-N-EtFOSAA**

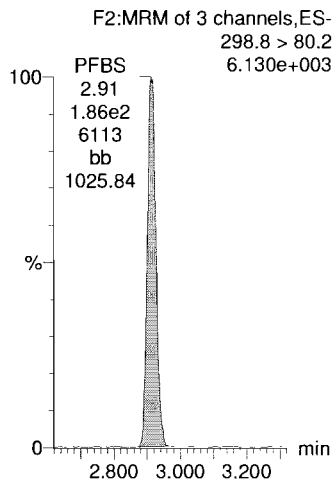


Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

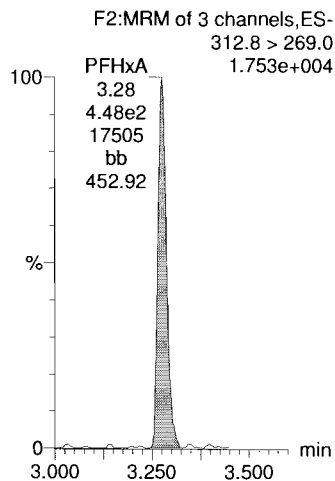
Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_3, Date: 24-Oct-2018, Time: 12:49:00, ID: ST181024G1-2 PFC CS-3 537 18J1830, Description: PFC CS-3 537 18J1830

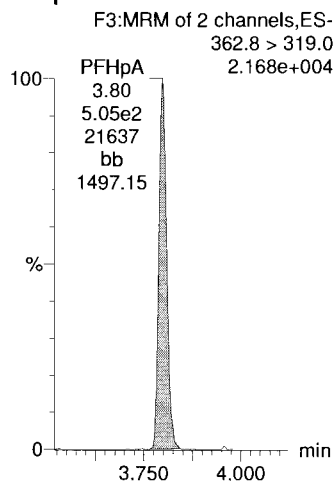
**PFBS**



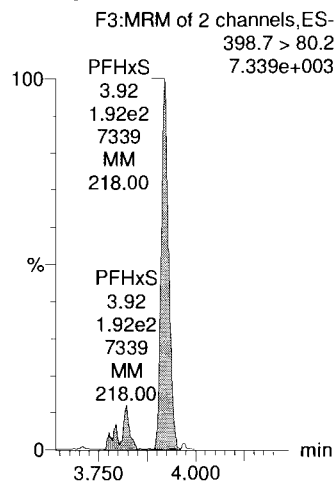
**PFHxA**



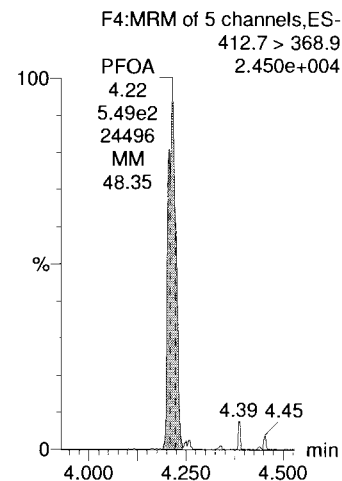
**PFHpA**



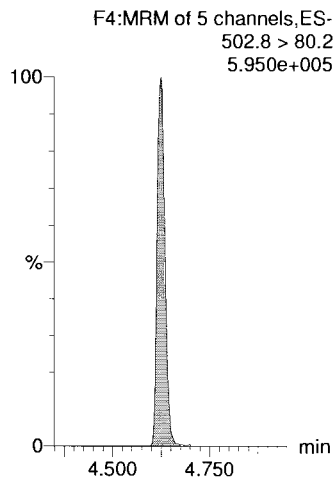
**PFHxS**



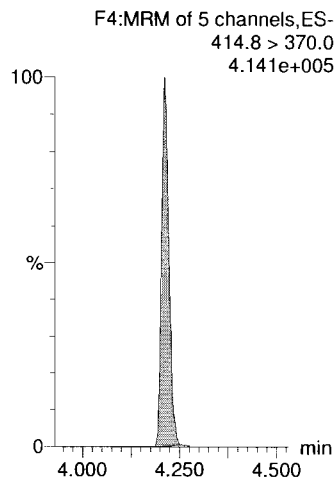
**PFOA**



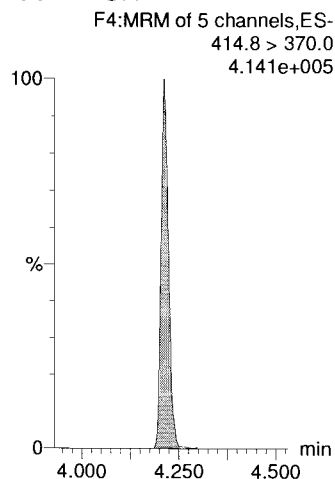
**13C4-PFOS**



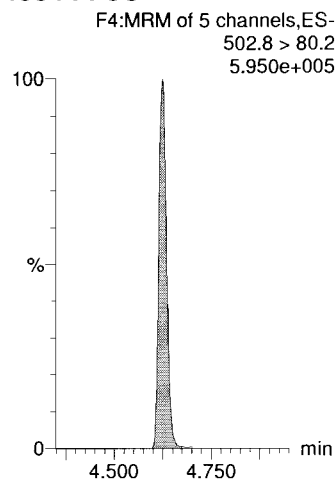
**13C2-PFOA**



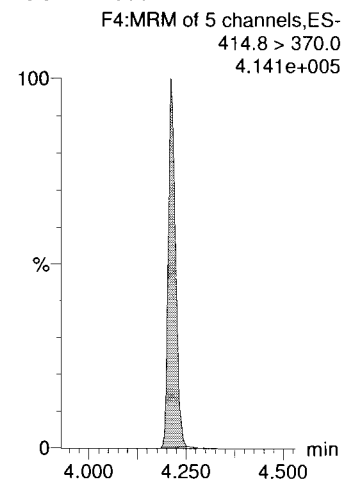
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



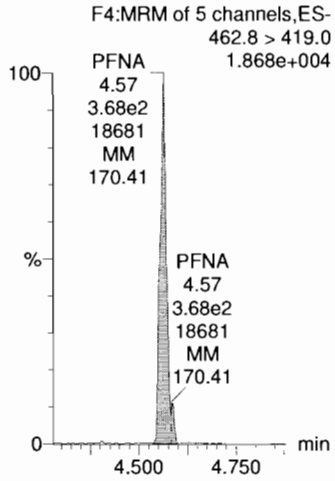
Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

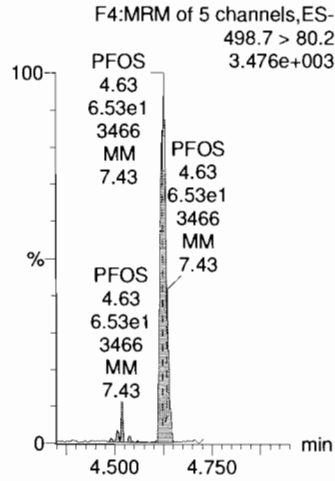
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_3, Date: 24-Oct-2018, Time: 12:49:00, ID: ST181024G1-2 PFC CS-3 537 18J1830, Description: PFC CS-3 537 18J1830

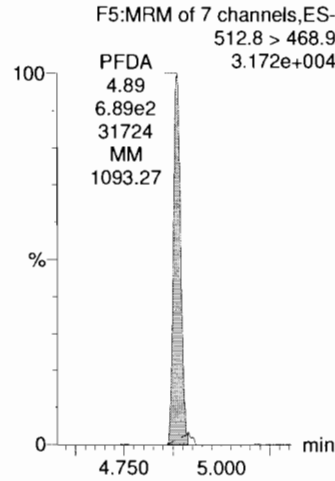
**PFNA**



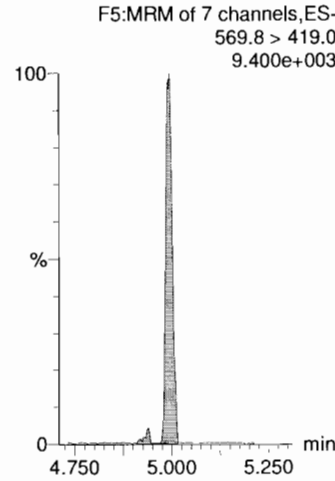
**PFOS**



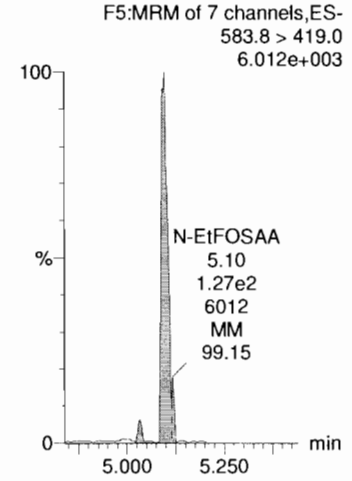
**PFDA**



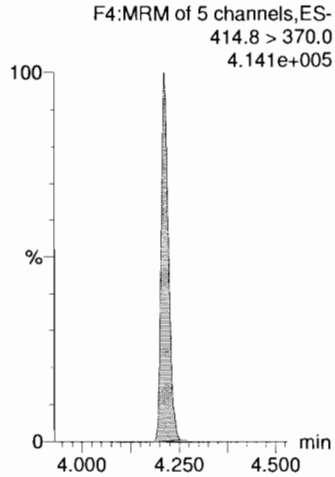
**N-MeFOSAA**



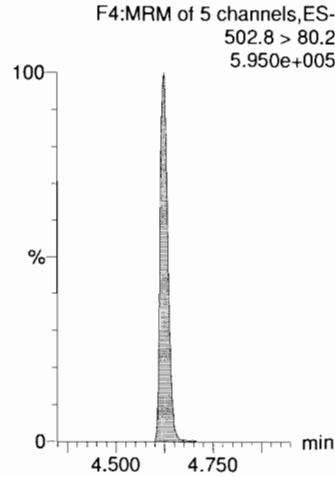
**N-EtFOSAA**



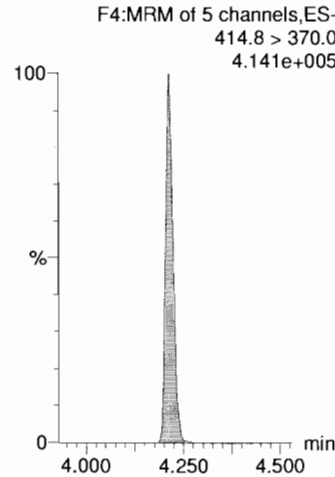
**13C2-PFOA**



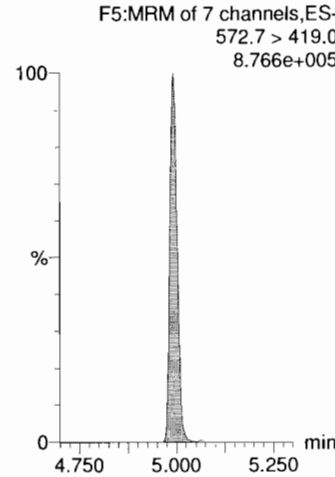
**13C4-PFOS**



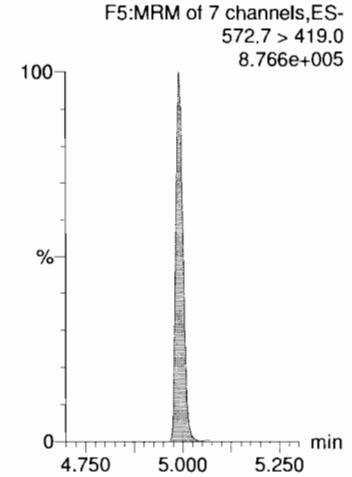
**13C2-PFOA**



**d3-N-MeFOSAA**



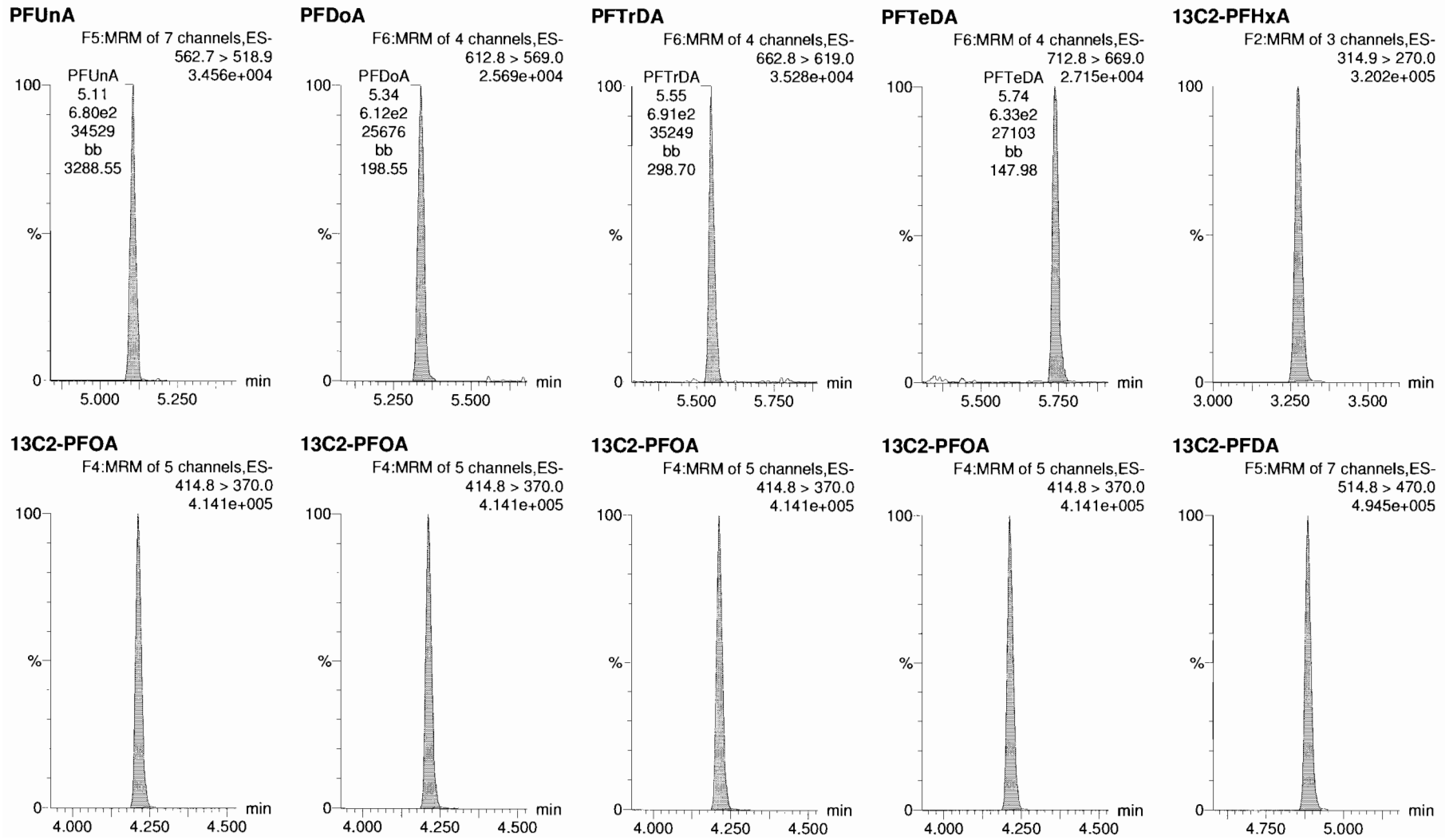
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_3, Date: 24-Oct-2018, Time: 12:49:00, ID: ST181024G1-2 PFC CS-3 537 18J1830, Description: PFC CS-3 537 18J1830





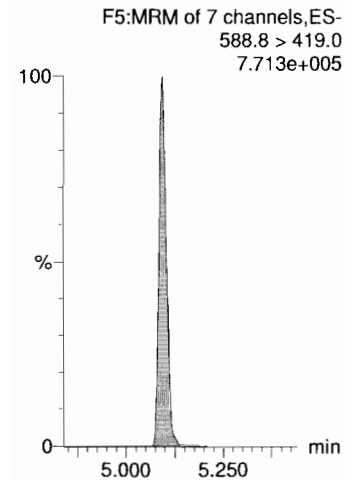
Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_3, Date: 24-Oct-2018, Time: 12:49:00, ID: ST181024G1-2 PFC CS-3 537 18J1830, Description: PFC CS-3 537 18J1830

**d5-N-EtFOSAA**



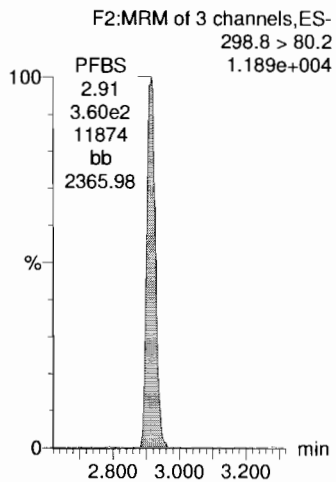
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Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

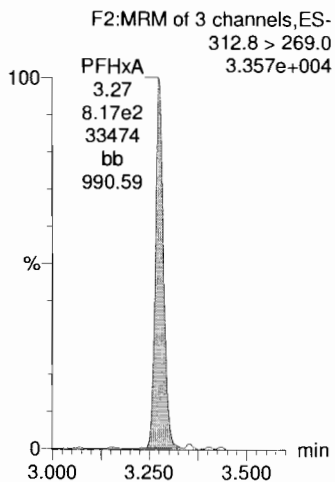
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_4, Date: 24-Oct-2018, Time: 13:01:56, ID: ST181024G1-3 PFC CS-2 537 18J1831, Description: PFC CS-2 537 18J1831

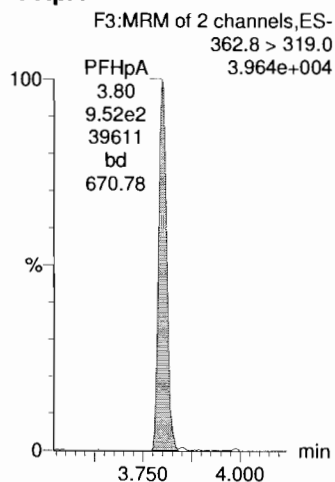
**PFBS**



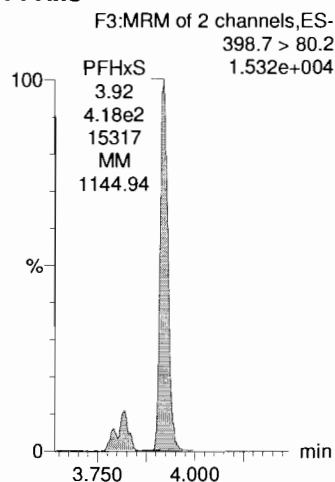
**PFHxA**



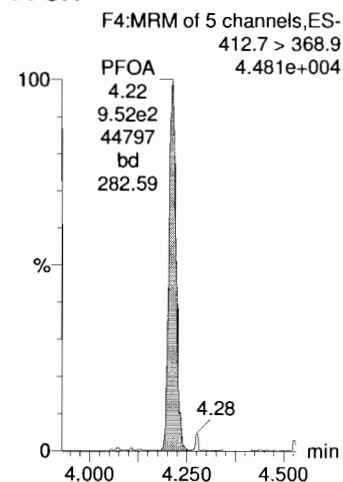
**PFHpA**



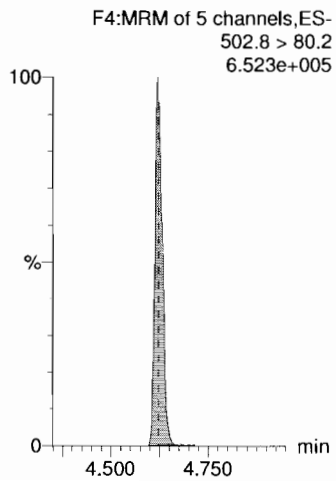
**PFHxS**



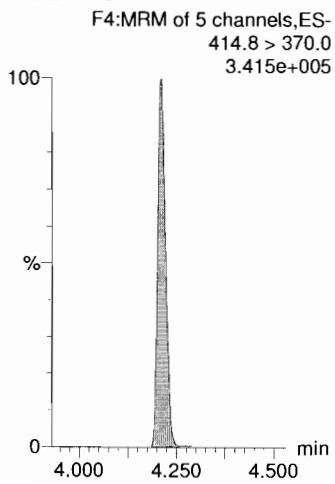
**PFOA**



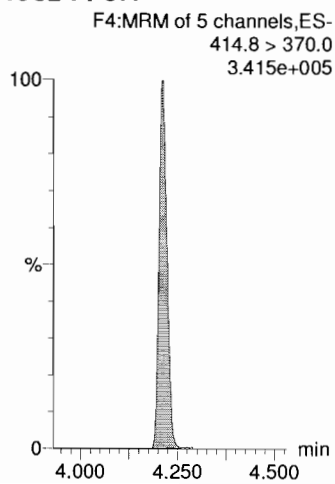
**13C4-PFOS**



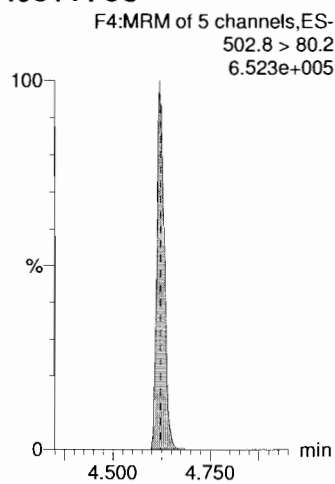
**13C2-PFOA**



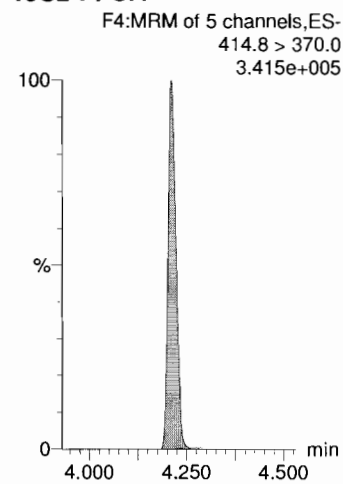
**13C2-PFOA**



**13C4-PFOS**



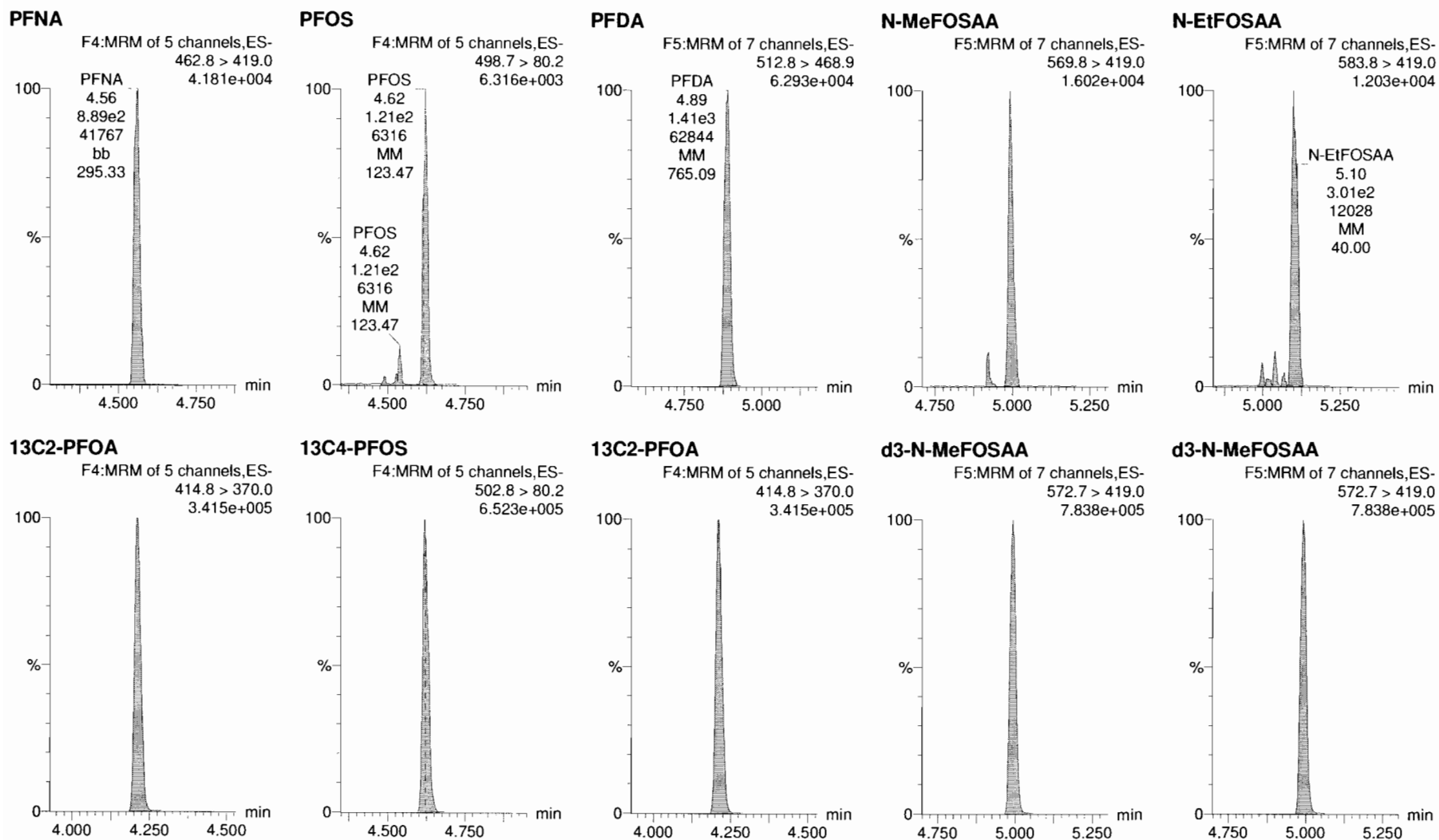
**13C2-PFOA**



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

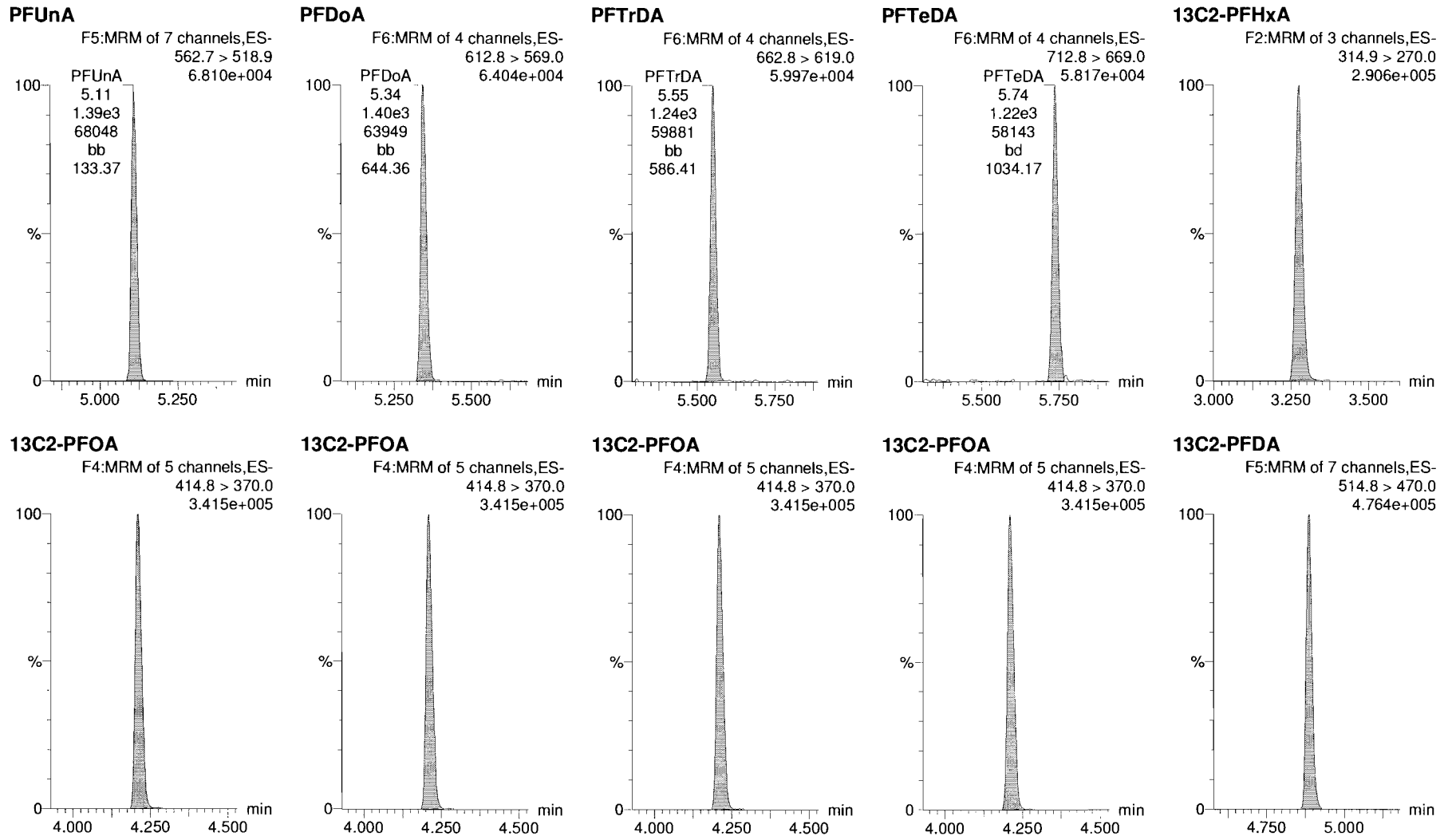
Name: 181024G1\_4, Date: 24-Oct-2018, Time: 13:01:56, ID: ST181024G1-3 PFC CS-2 537 18J1831, Description: PFC CS-2 537 18J1831



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_4, Date: 24-Oct-2018, Time: 13:01:56, ID: ST181024G1-3 PFC CS-2 537 18J1831, Description: PFC CS-2 537 18J1831



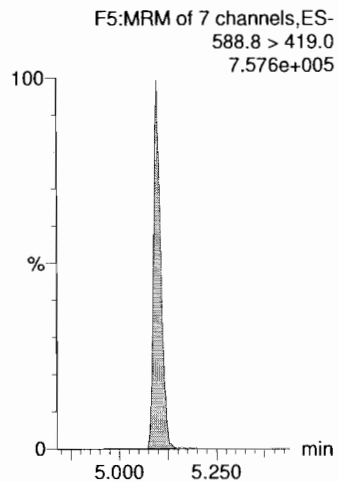
Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_4, Date: 24-Oct-2018, Time: 13:01:56, ID: ST181024G1-3 PFC CS-2 537 18J1831, Description: PFC CS-2 537 18J1831

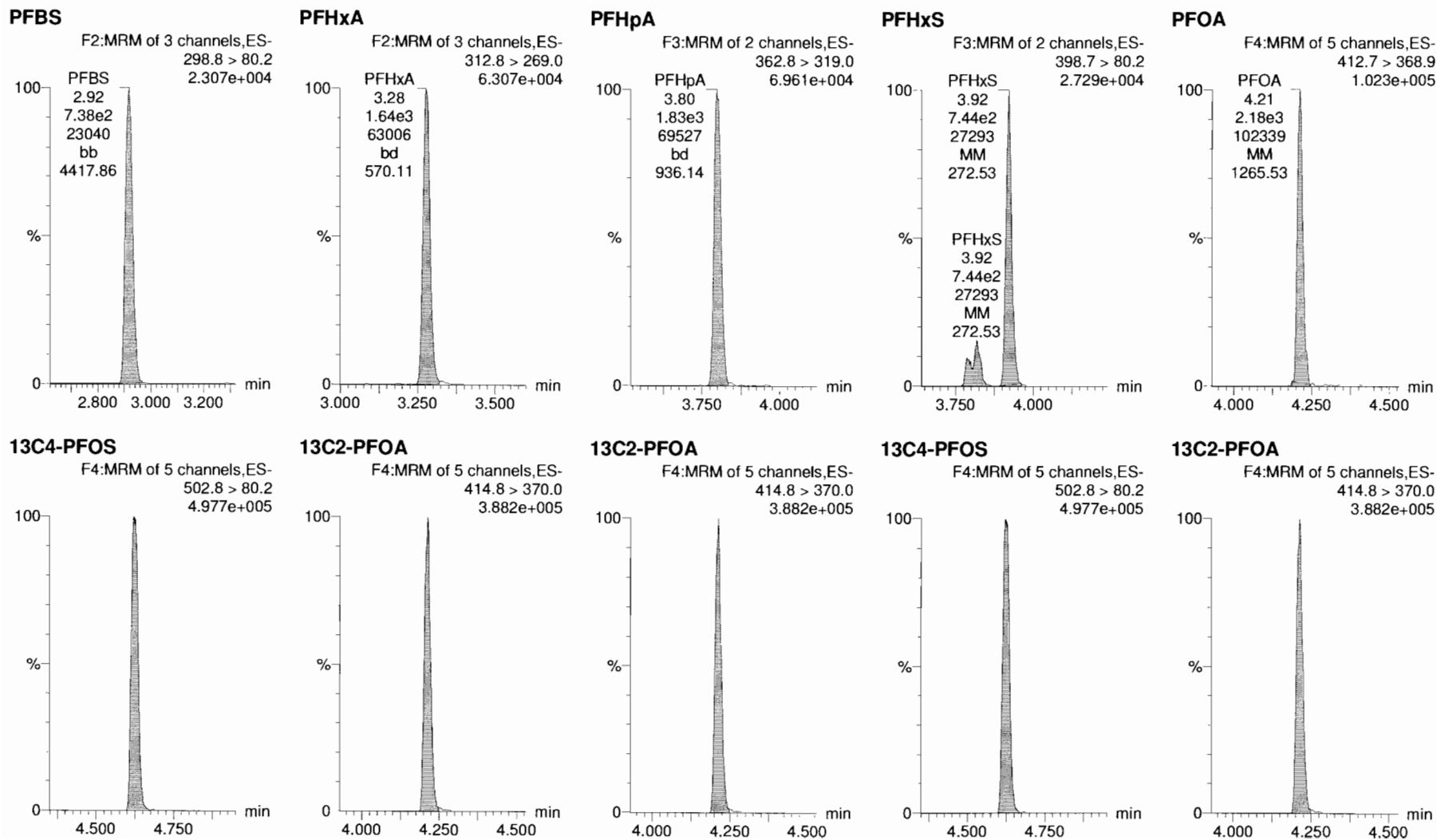
**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

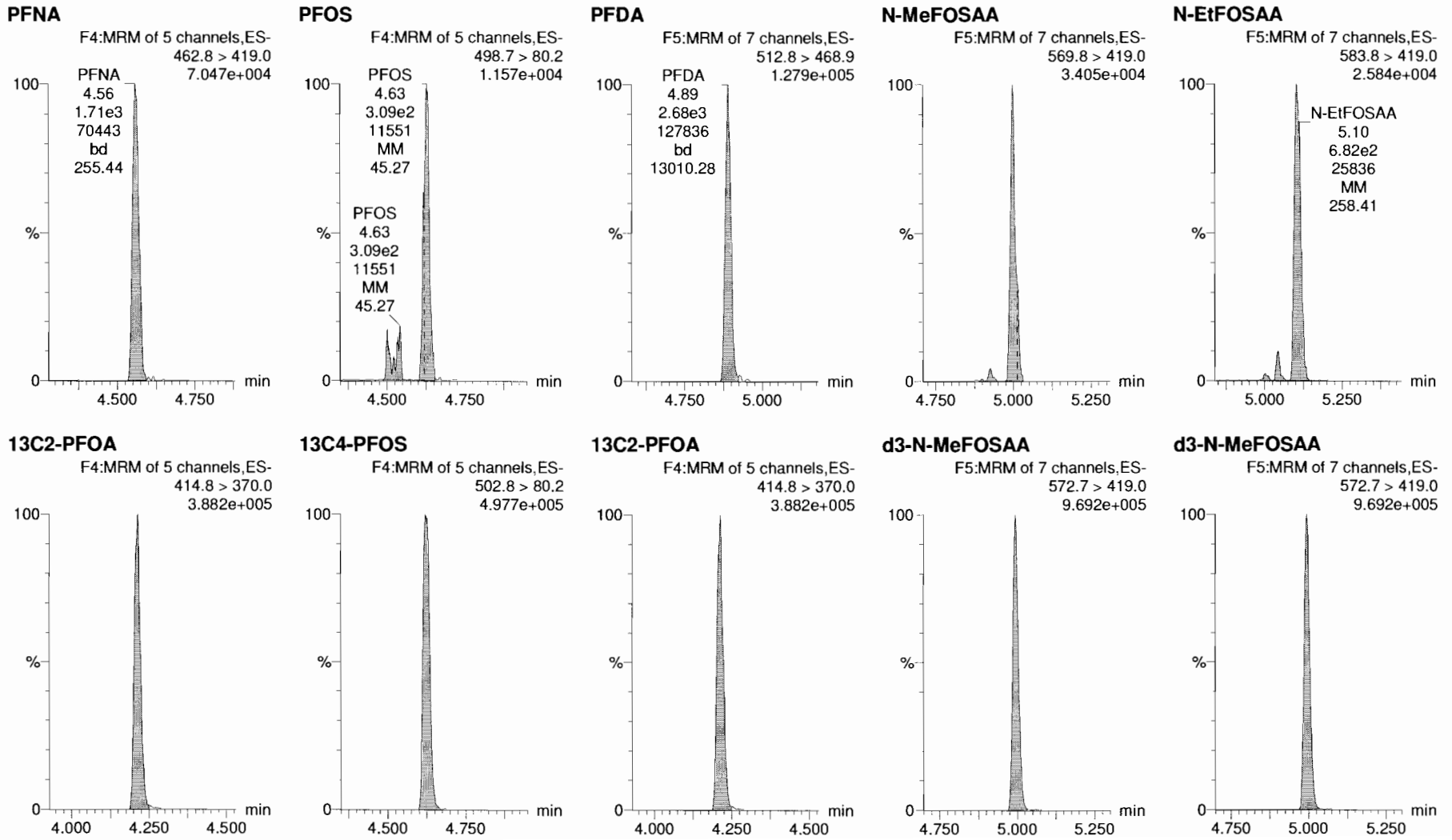
Name: 181024G1\_5, Date: 24-Oct-2018, Time: 13:14:53, ID: ST181024G1-4 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_5, Date: 24-Oct-2018, Time: 13:14:53, ID: ST181024G1-4 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

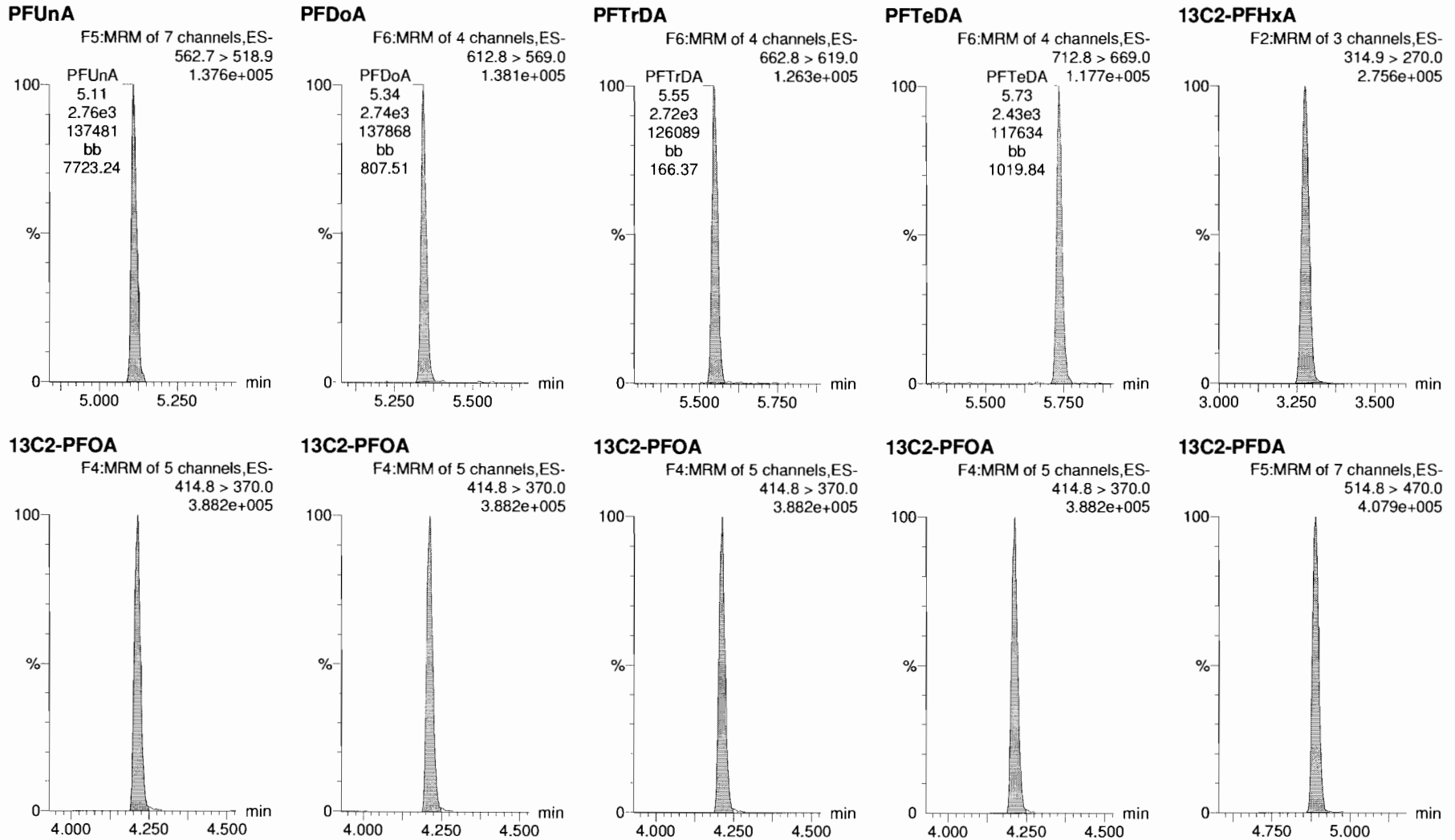


Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_5, Date: 24-Oct-2018, Time: 13:14:53, ID: ST181024G1-4 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832





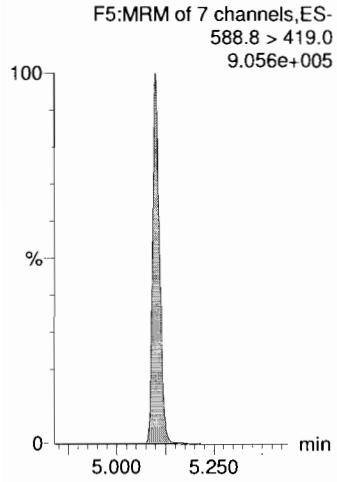
Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_5, Date: 24-Oct-2018, Time: 13:14:53, ID: ST181024G1-4 PFC CS-1 537 18J1832, Description: PFC CS-1 537 18J1832

**d5-N-EtFOSAA**



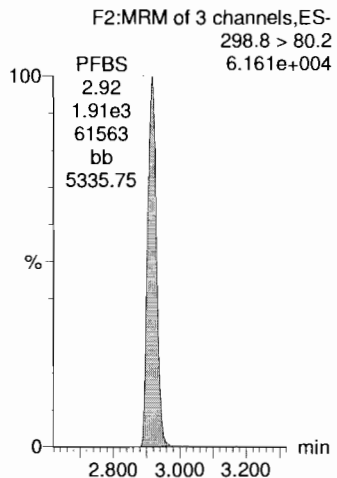
Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

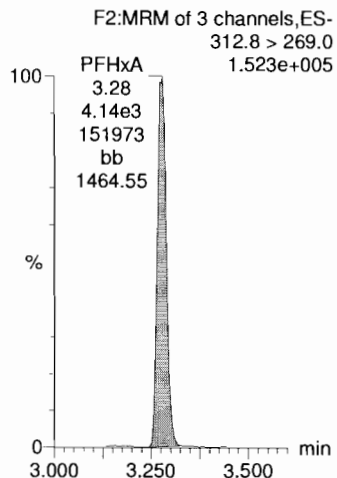
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_6, Date: 24-Oct-2018, Time: 13:27:51, ID: ST181024G1-5 PFC CS0 537 18J1833, Description: PFC CS0 537 18J1833

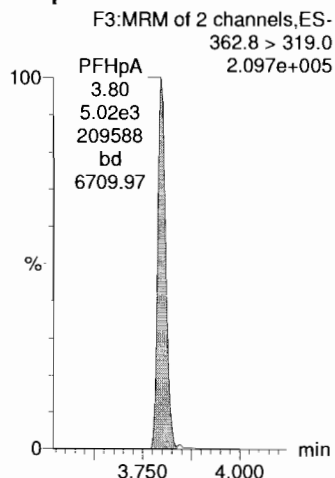
**PFBS**



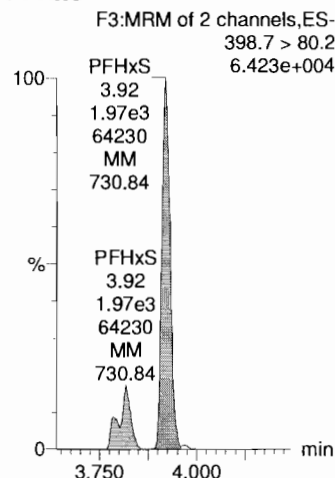
**PFHxA**



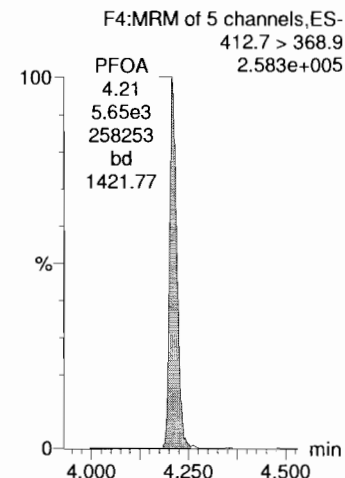
**PFHpA**



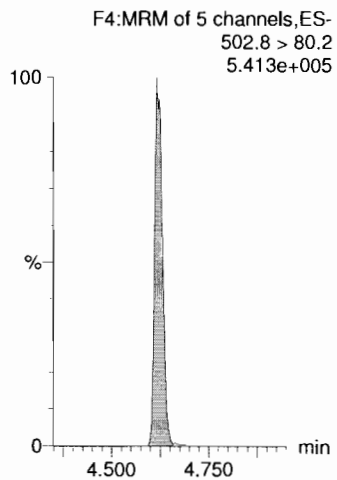
**PFHxS**



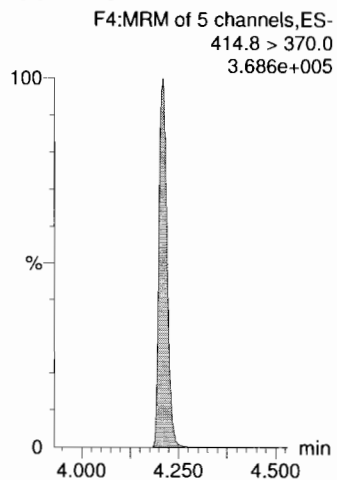
**PFOA**



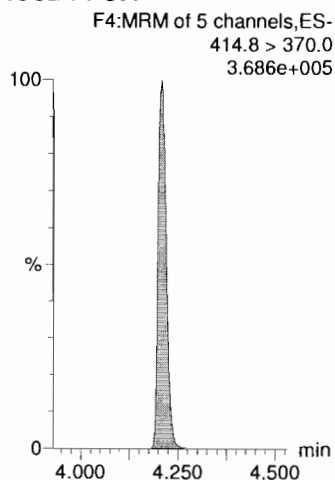
**13C4-PFOS**



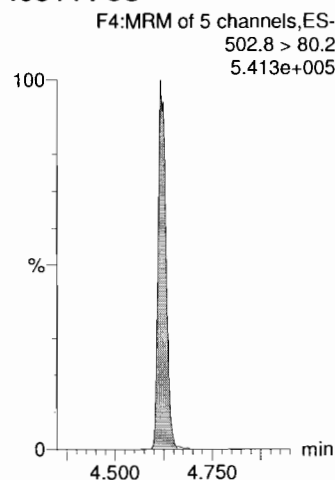
**13C2-PFOA**



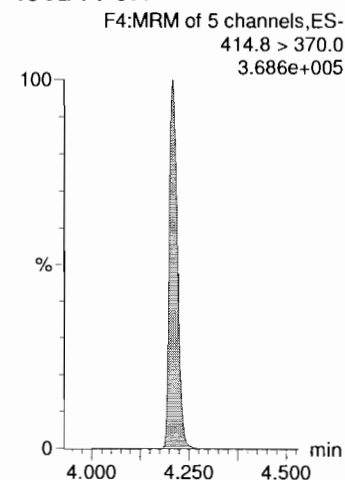
**13C2-PFOA**



**13C4-PFOS**



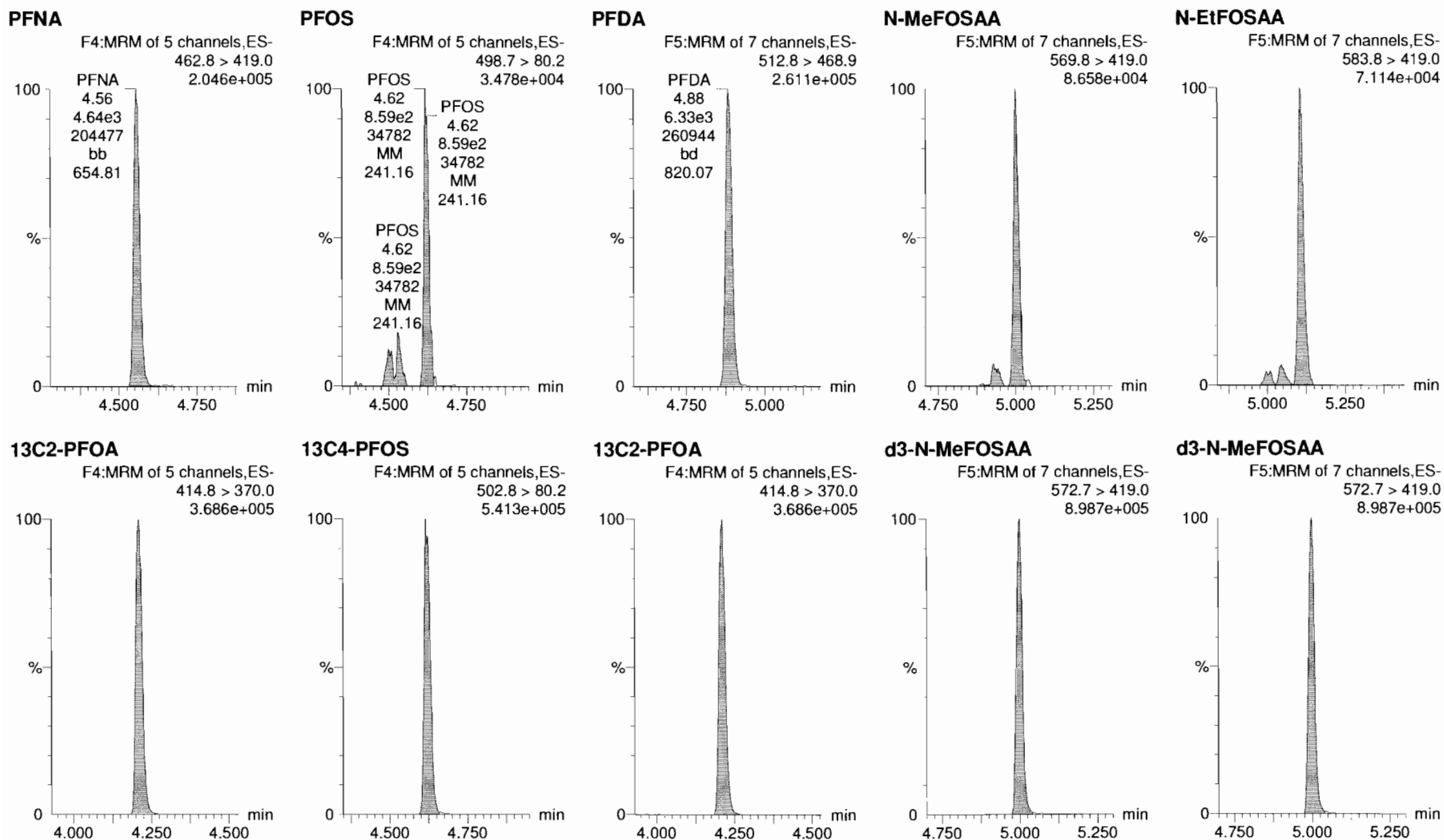
**13C2-PFOA**



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_6, Date: 24-Oct-2018, Time: 13:27:51, ID: ST181024G1-5 PFC CS0 537 18J1833, Description: PFC CS0 537 18J1833

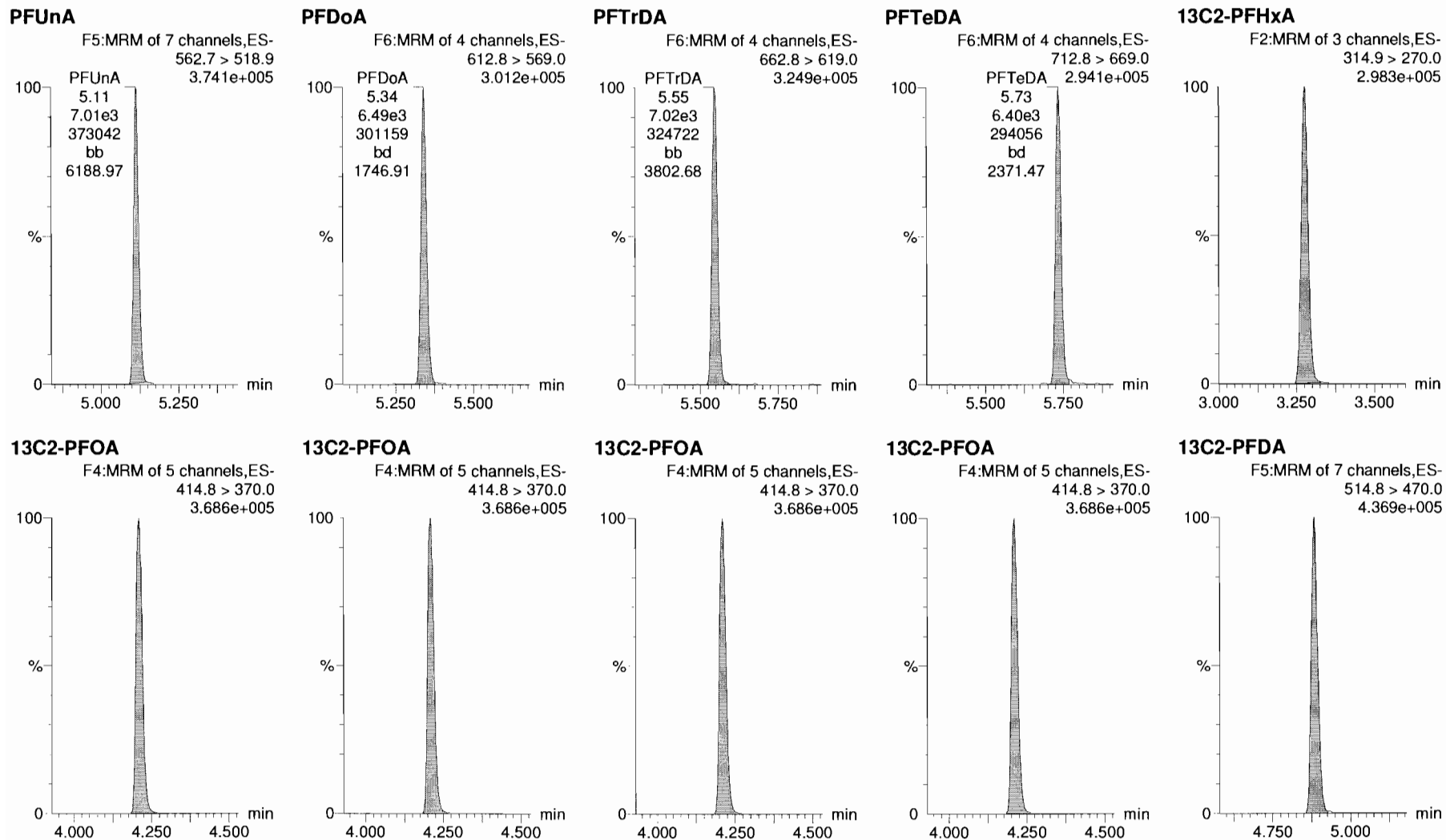


Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_6, Date: 24-Oct-2018, Time: 13:27:51, ID: ST181024G1-5 PFC CS0 537 18J1833, Description: PFC CS0 537 18J1833



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

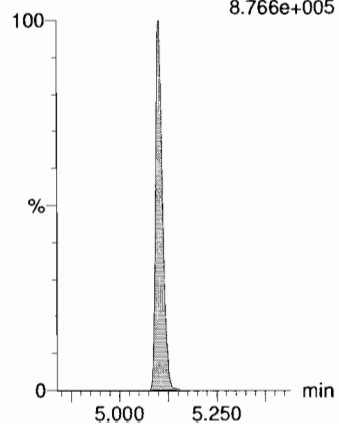
Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_6, Date: 24-Oct-2018, Time: 13:27:51, ID: ST181024G1-5 PFC CS0 537 18J1833, Description: PFC CS0 537 18J1833

**d5-N-EtFOSAA**

F5:MRM of 7 channels,ES-  
588.8 > 419.0  
8.766e+005



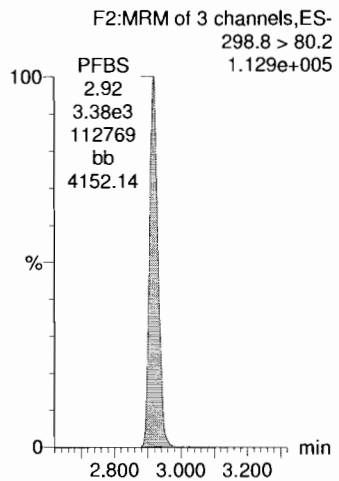
Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

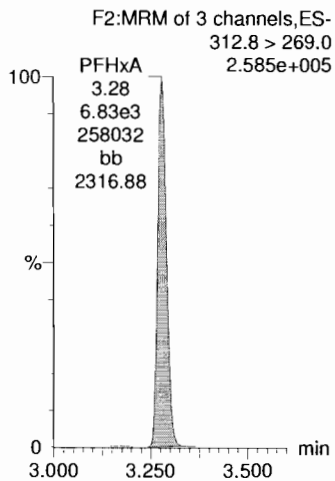
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_7, Date: 24-Oct-2018, Time: 13:40:48, ID: ST181024G1-6 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

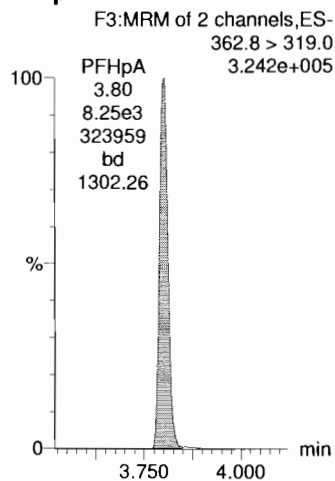
**PFBS**



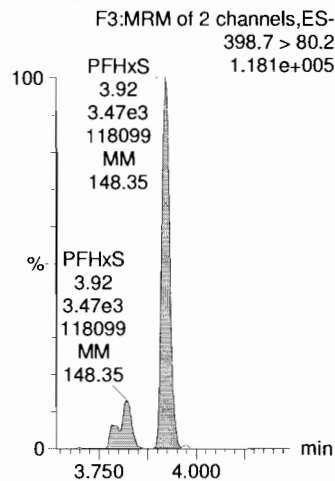
**PFHxA**



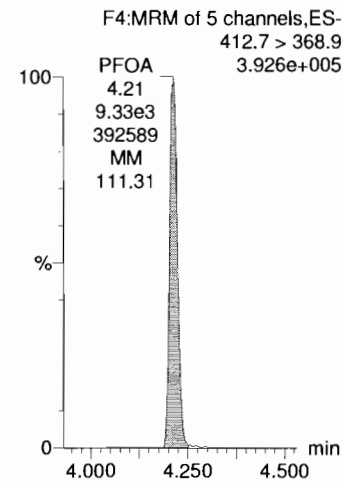
**PFHpA**



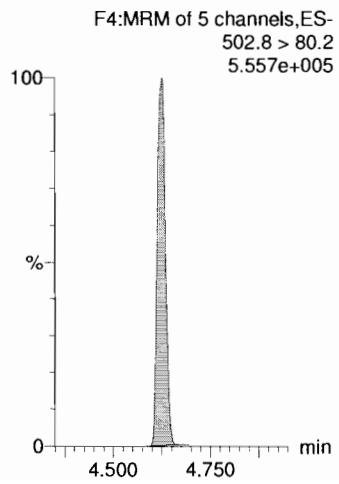
**PFHxS**



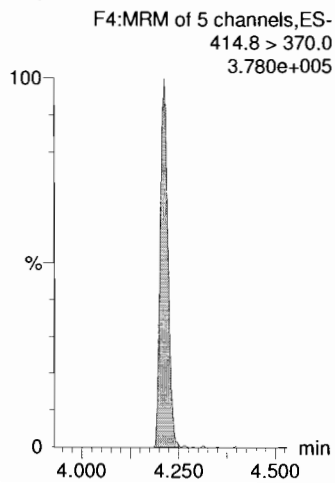
**PFOA**



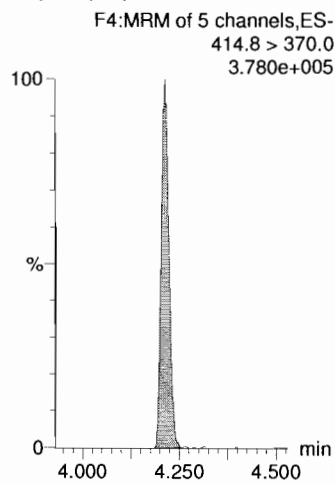
**13C4-PFOS**



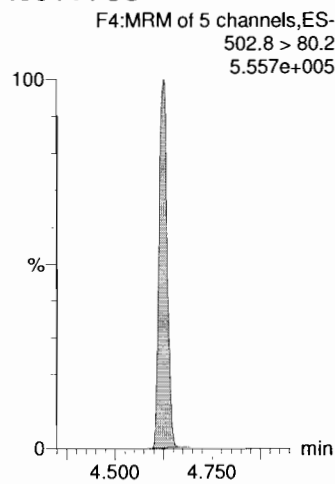
**13C2-PFOA**



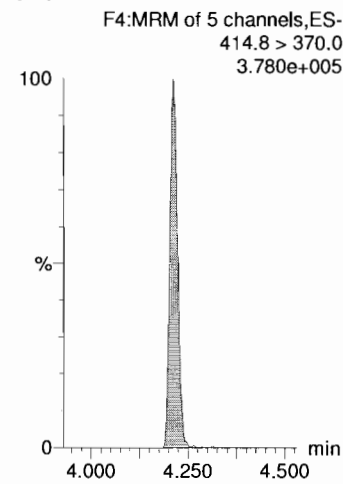
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

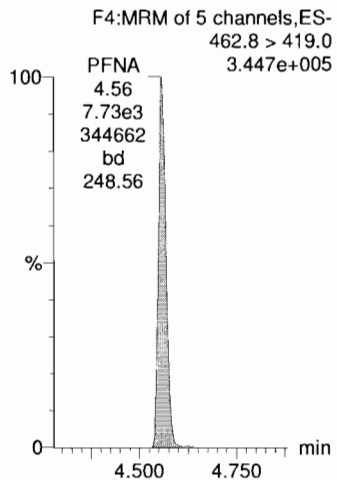


Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

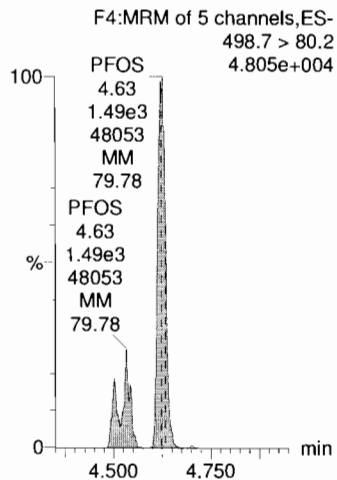
Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_7, Date: 24-Oct-2018, Time: 13:40:48, ID: ST181024G1-6 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

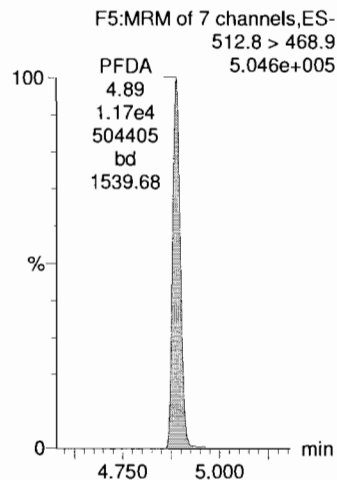
**PFNA**



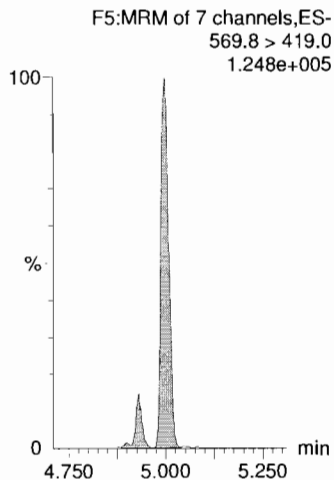
**PFOS**



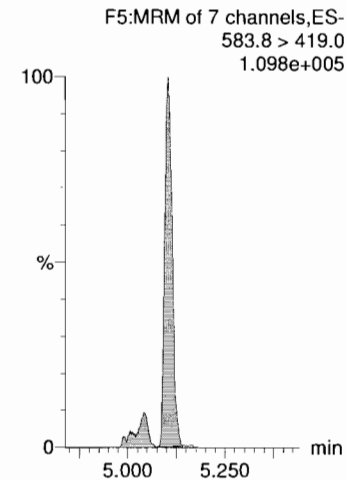
**PFDA**



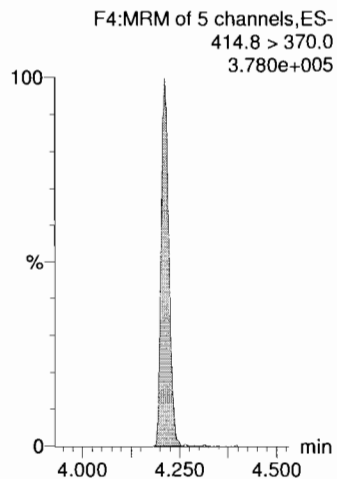
**N-MeFOSAA**



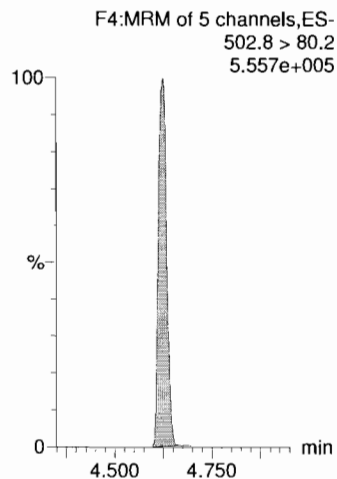
**N-EtFOSAA**



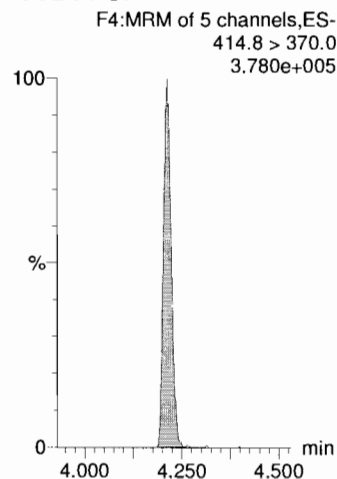
**13C2-PFOA**



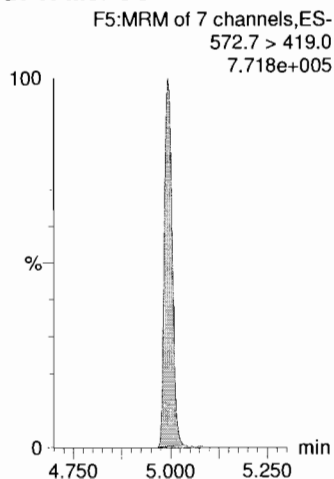
**13C4-PFOS**



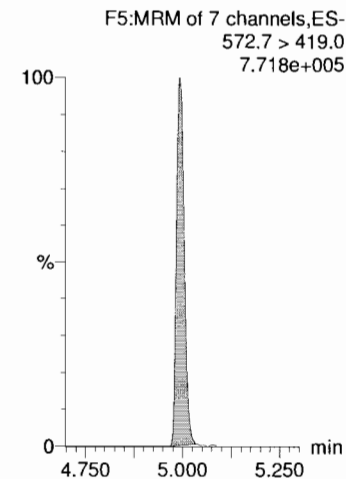
**13C2-PFOA**



**d3-N-MeFOSAA**



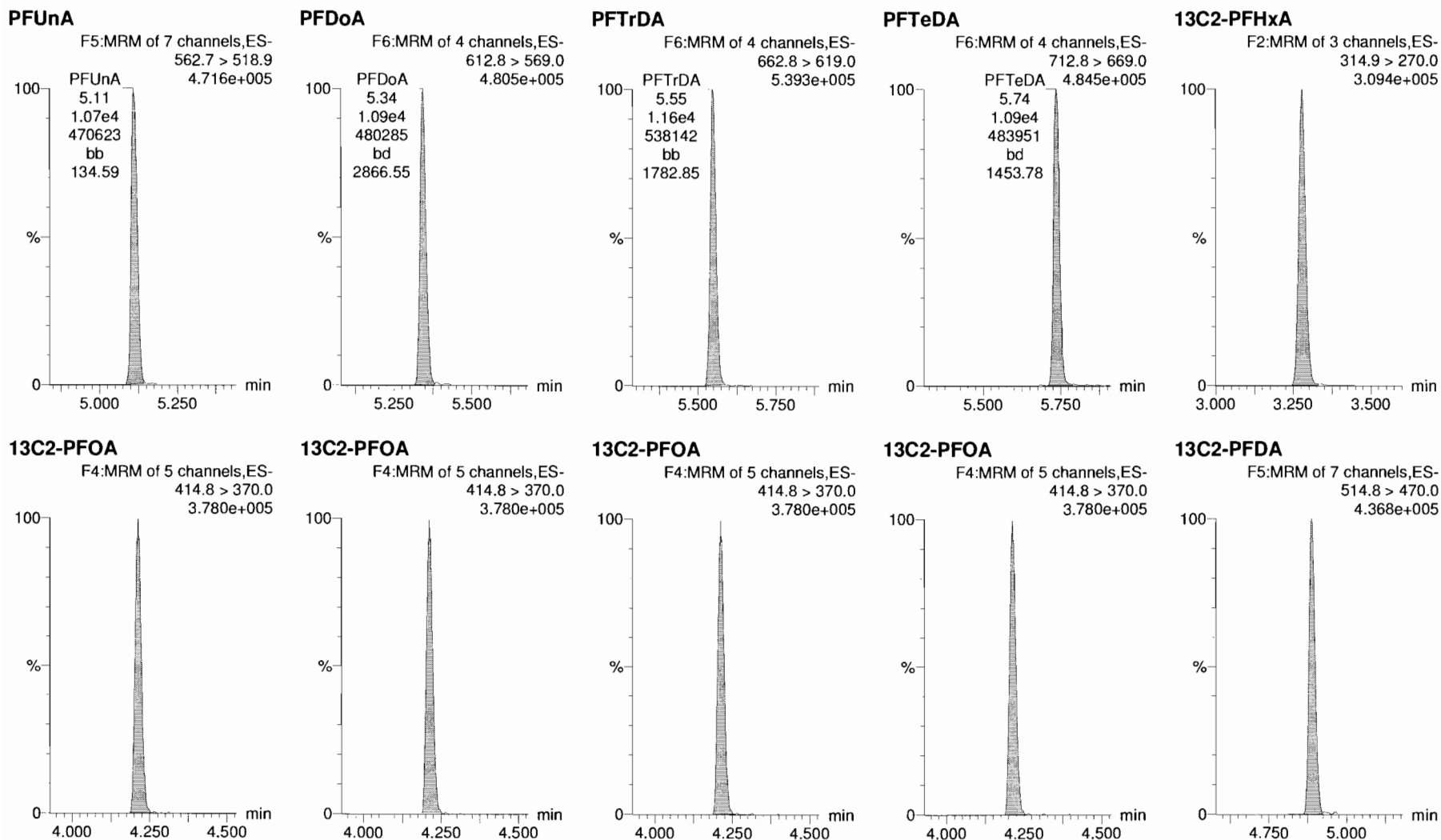
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_7, Date: 24-Oct-2018, Time: 13:40:48, ID: ST181024G1-6 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834





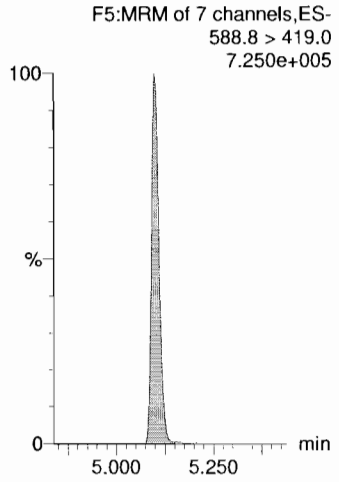
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Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_7, Date: 24-Oct-2018, Time: 13:40:48, ID: ST181024G1-6 PFC CS1 537 18J1834, Description: PFC CS1 537 18J1834

**d5-N-EtFOSAA**



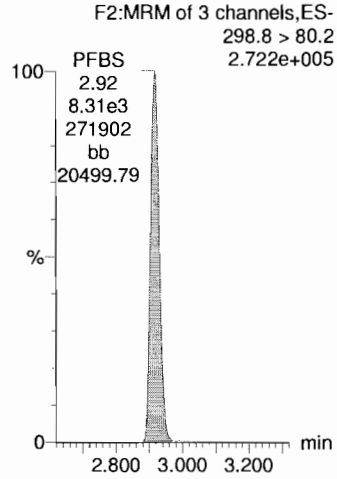
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Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

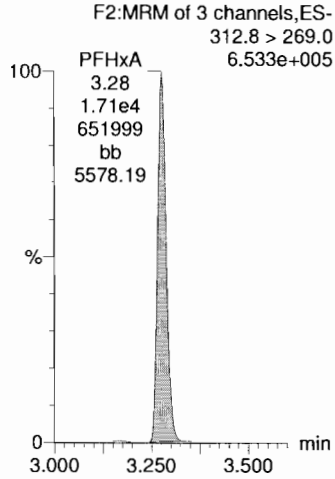
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_8, Date: 24-Oct-2018, Time: 13:53:46, ID: ST181024G1-7 PFC CS2 537 18J1835, Description: PFC CS2 537 18J1835

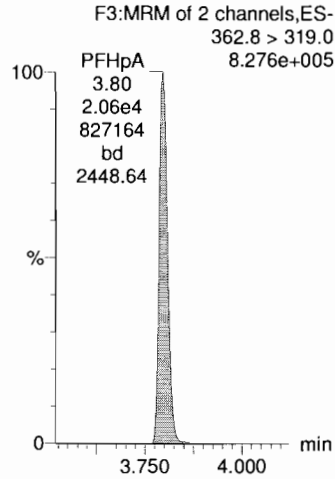
**PFBS**



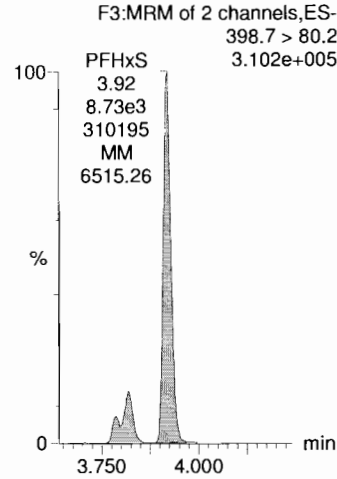
**PFHxA**



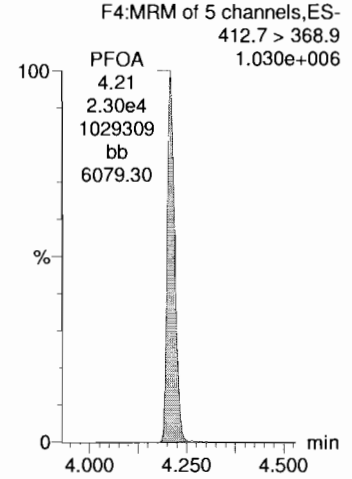
**PFHpA**



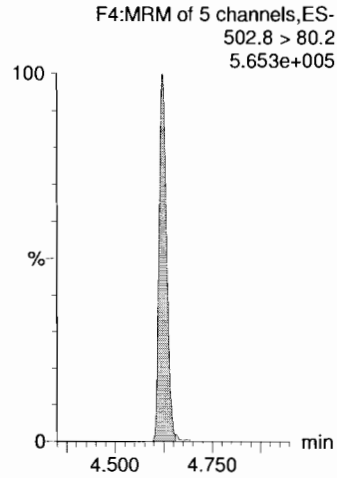
**PFHxS**



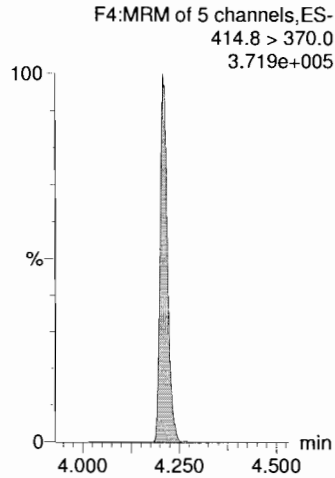
**PFOA**



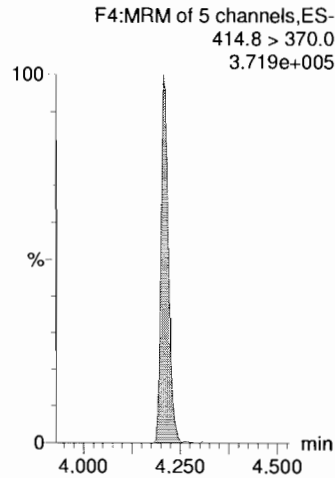
**13C4-PFOS**



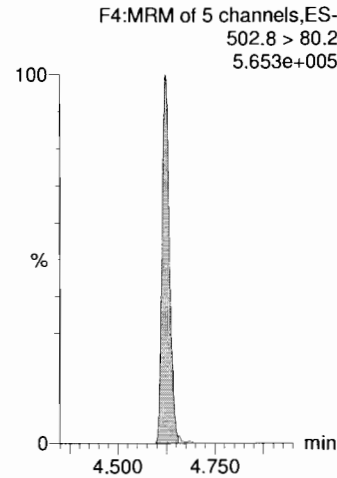
**13C2-PFOA**



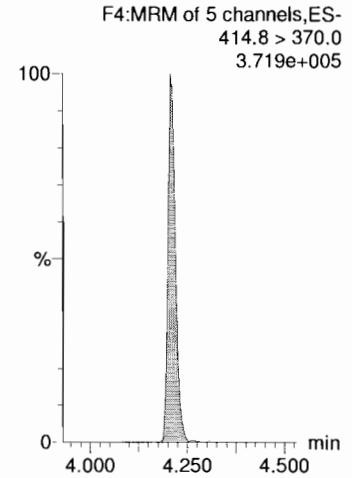
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

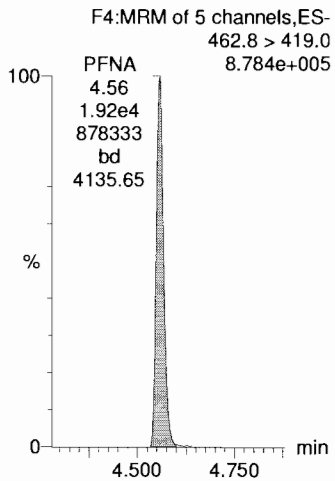


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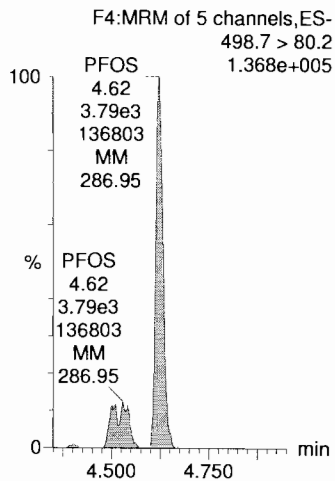
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Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_8, Date: 24-Oct-2018, Time: 13:53:46, ID: ST181024G1-7 PFC CS2 537 18J1835, Description: PFC CS2 537 18J1835

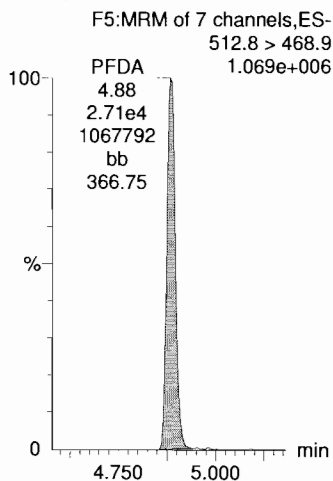
**PFNA**



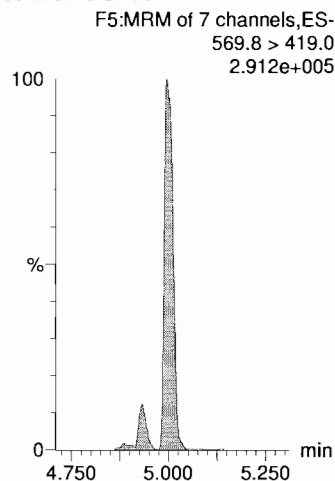
**PFOS**



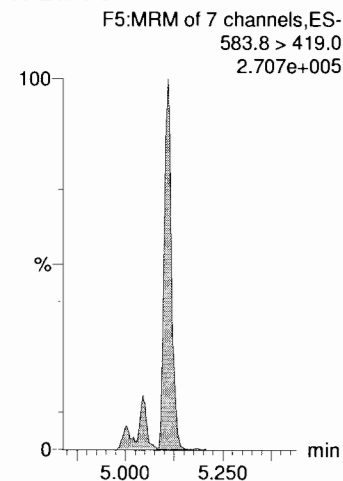
**PFDA**



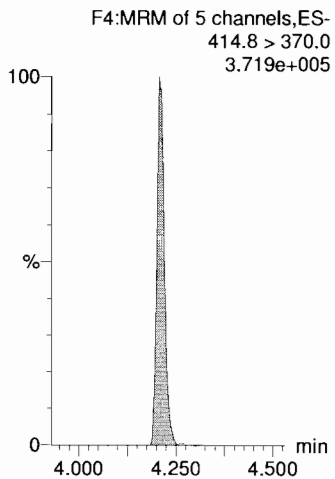
**N-MeFOSAA**



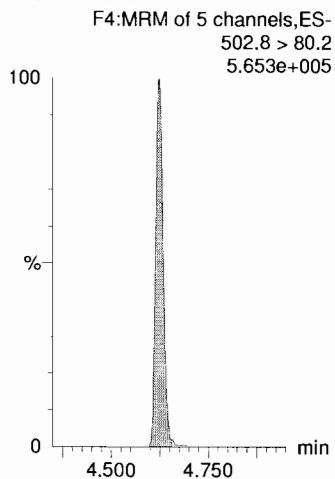
**N-EtFOSAA**



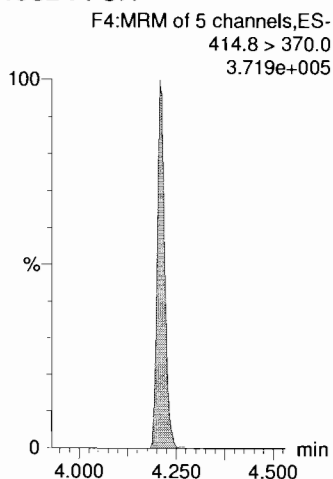
**13C2-PFOA**



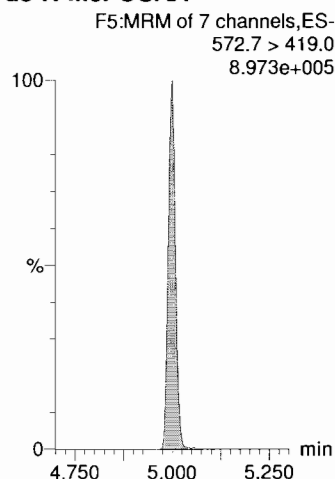
**13C4-PFOS**



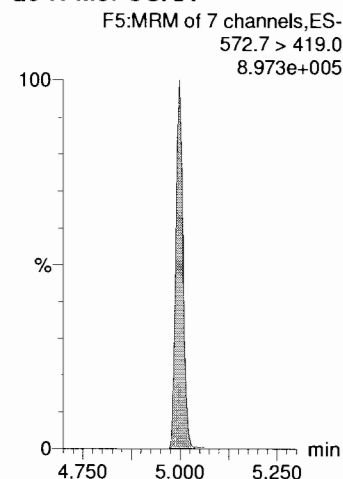
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

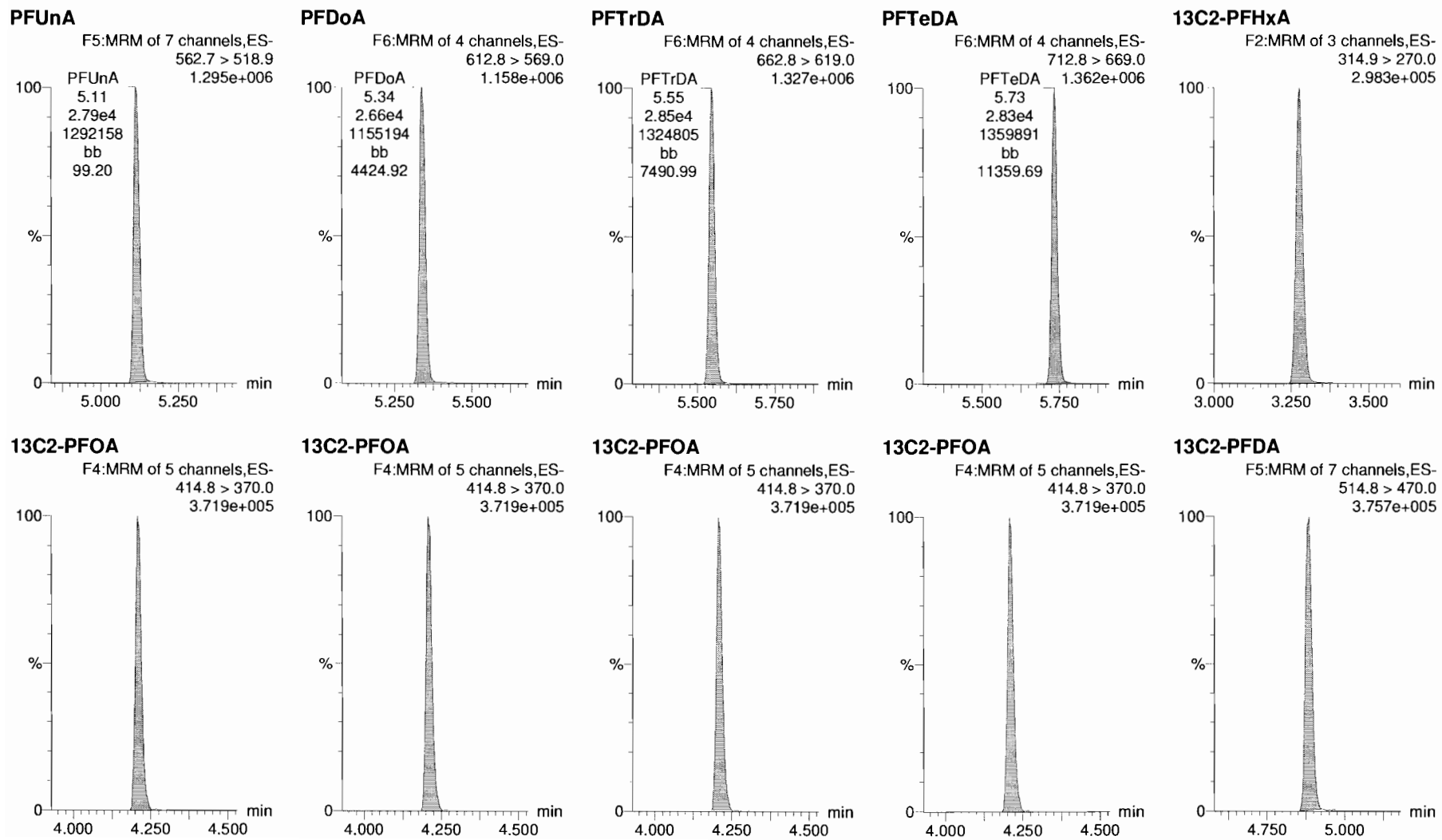


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Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_8, Date: 24-Oct-2018, Time: 13:53:46, ID: ST181024G1-7 PFC CS2 537 18J1835, Description: PFC CS2 537 18J1835



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

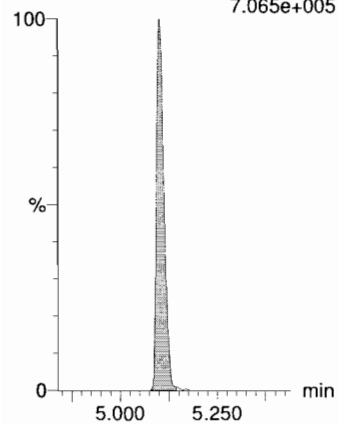
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Name: 181024G1\_8, Date: 24-Oct-2018, Time: 13:53:46, ID: ST181024G1-7 PFC CS2 537 18J1835, Description: PFC CS2 537 18J1835

**d5-N-EtFOSAA**

F5:MRM of 7 channels,ES-  
588.8 > 419.0  
7.065e+005

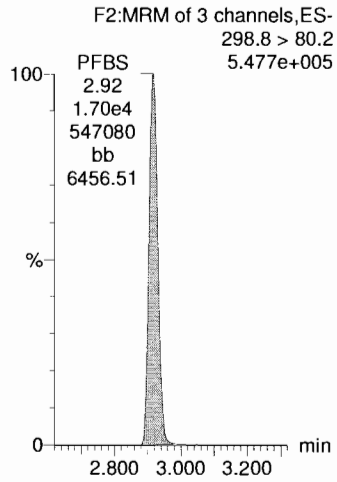


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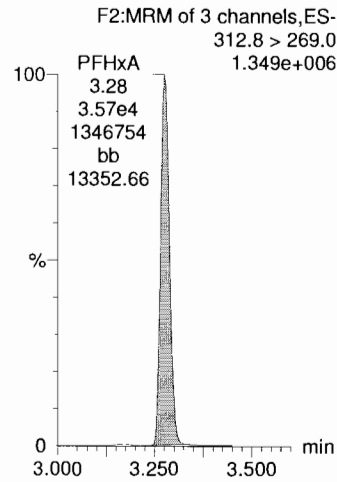
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Name: 181024G1\_9, Date: 24-Oct-2018, Time: 14:06:51, ID: ST181024G1-8 PFC CS3 537 18J1836, Description: PFC CS3 537 18J1836

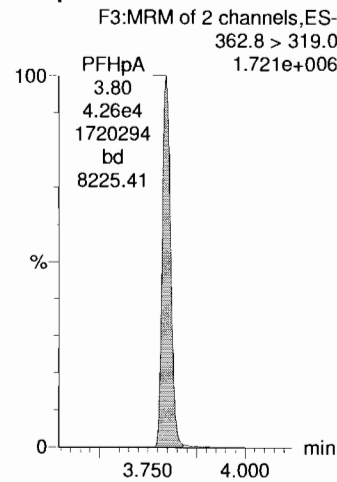
**PFBS**



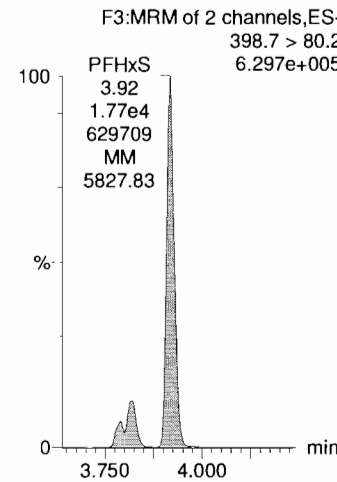
**PFHxA**



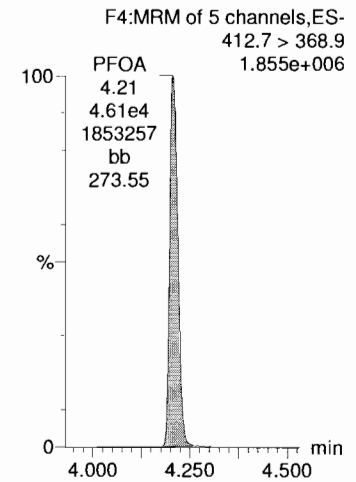
**PFHpA**



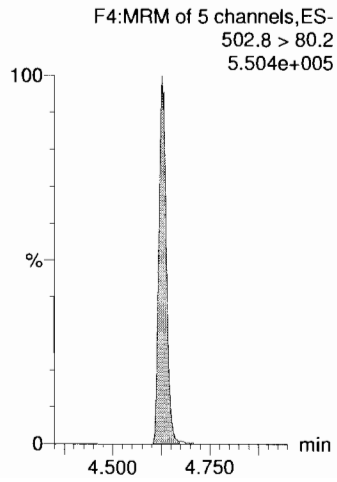
**PFHxS**



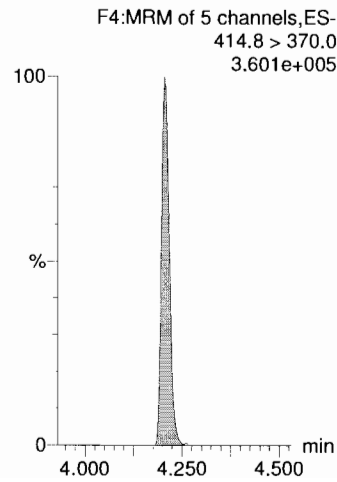
**PFOA**



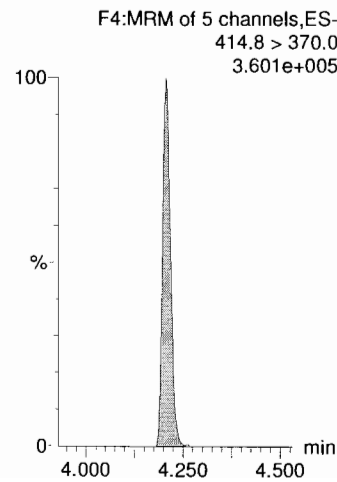
**13C4-PFOS**



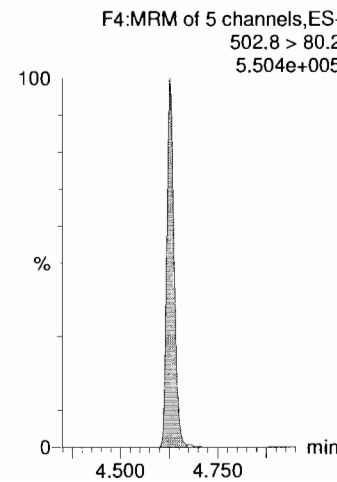
**13C2-PFOA**



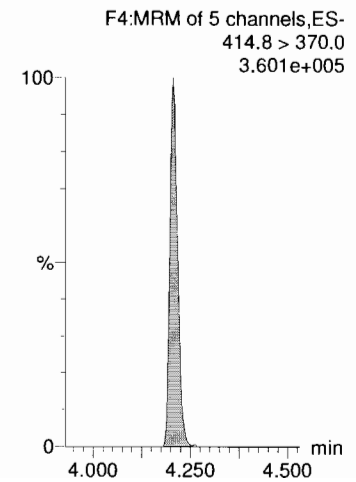
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**



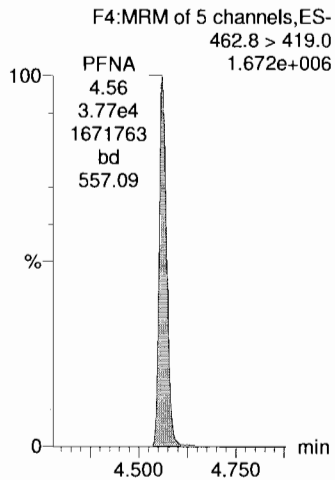
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Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

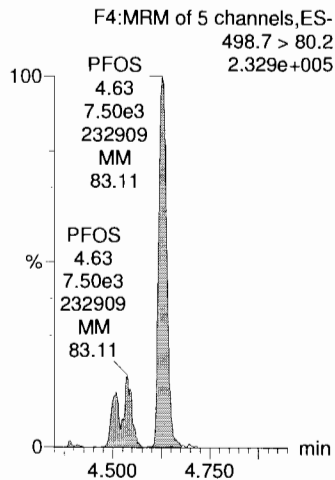
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_9, Date: 24-Oct-2018, Time: 14:06:51, ID: ST181024G1-8 PFC CS3 537 18J1836, Description: PFC CS3 537 18J1836

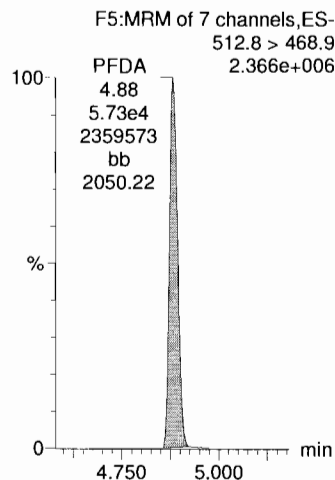
**PFNA**



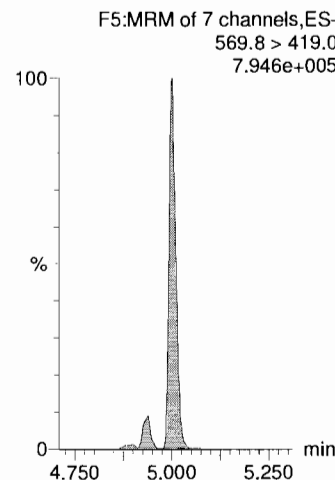
**PFOS**



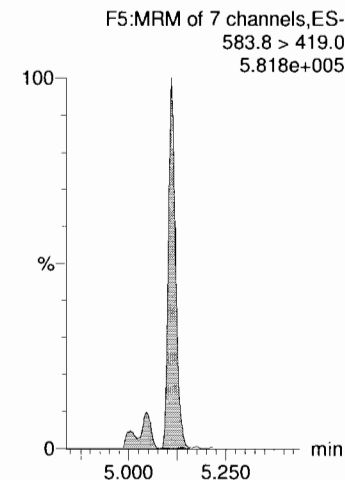
**PFDA**



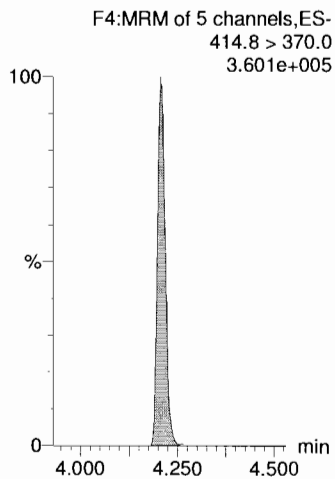
**N-MeFOSAA**



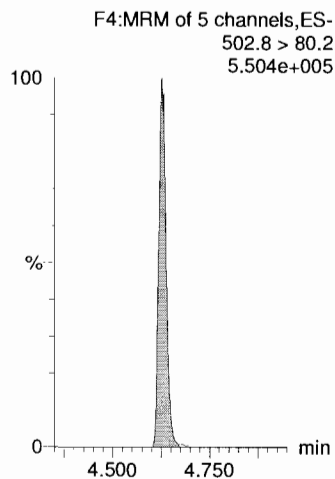
**N-EtFOSAA**



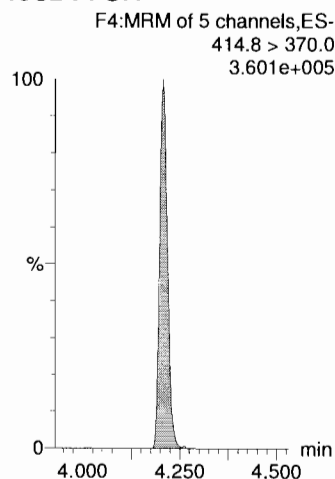
**13C2-PFOA**



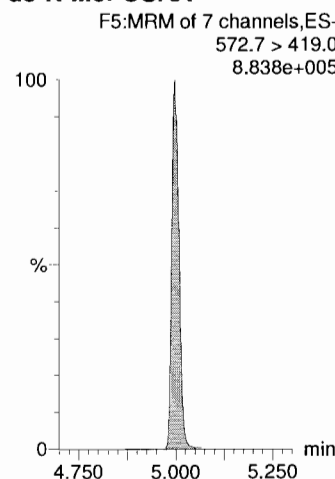
**13C4-PFOS**



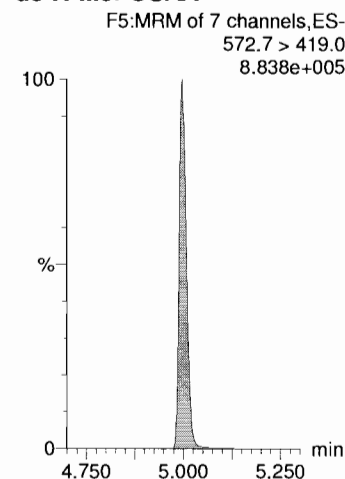
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

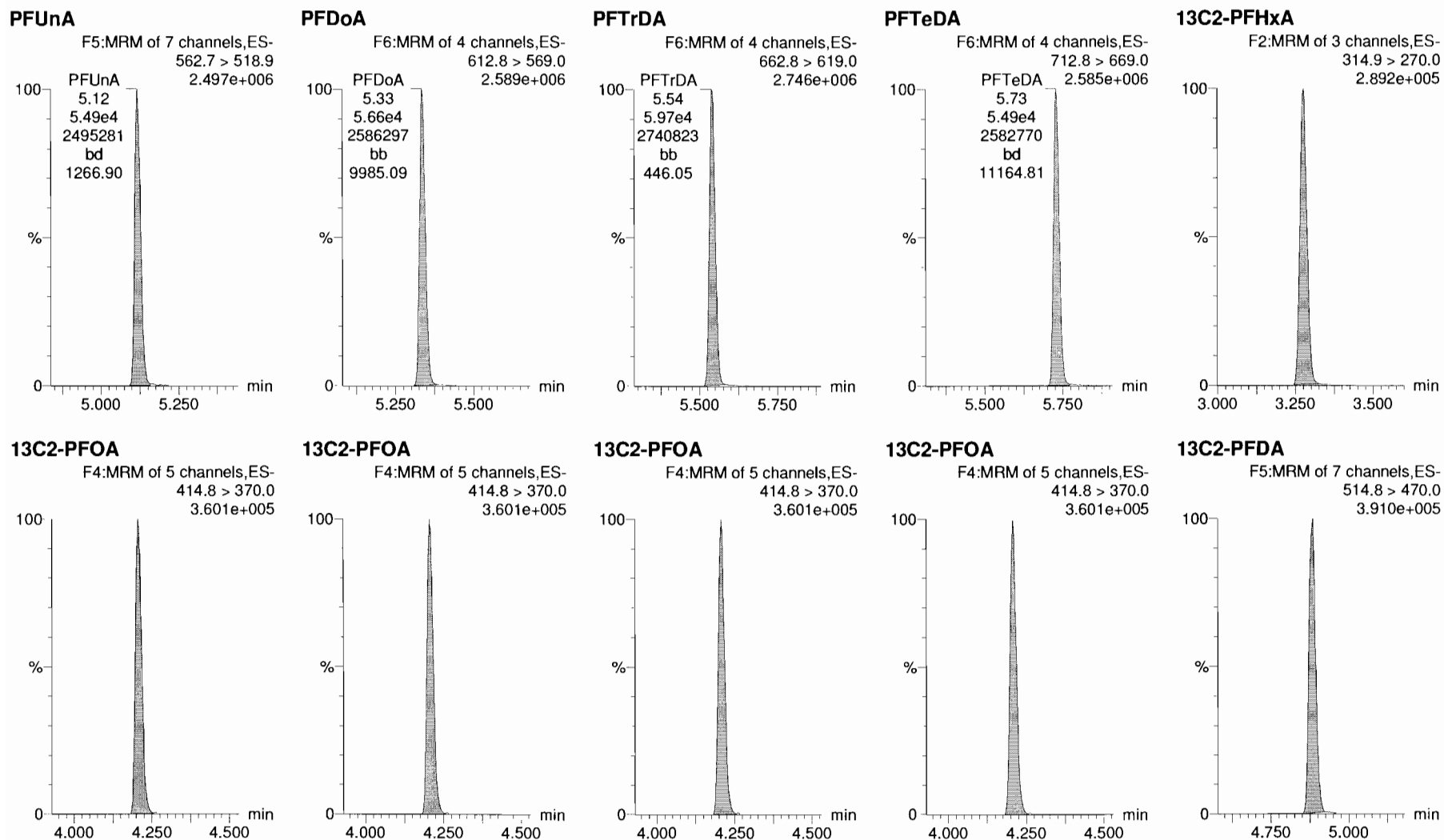


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Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_9, Date: 24-Oct-2018, Time: 14:06:51, ID: ST181024G1-8 PFC CS3 537 18J1836, Description: PFC CS3 537 18J1836





Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

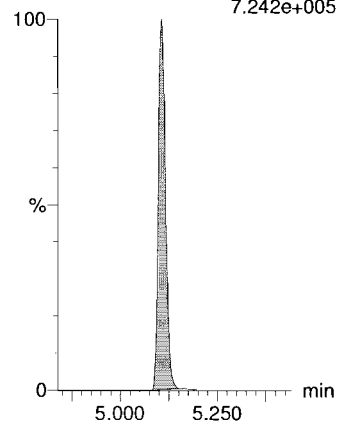
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Name: 181024G1\_9, Date: 24-Oct-2018, Time: 14:06:51, ID: ST181024G1-8 PFC CS3 537 18J1836, Description: PFC CS3 537 18J1836

**d5-N-EtFOSAA**

F5:MRM of 7 channels,ES-  
588.8 > 419.0  
7.242e+005

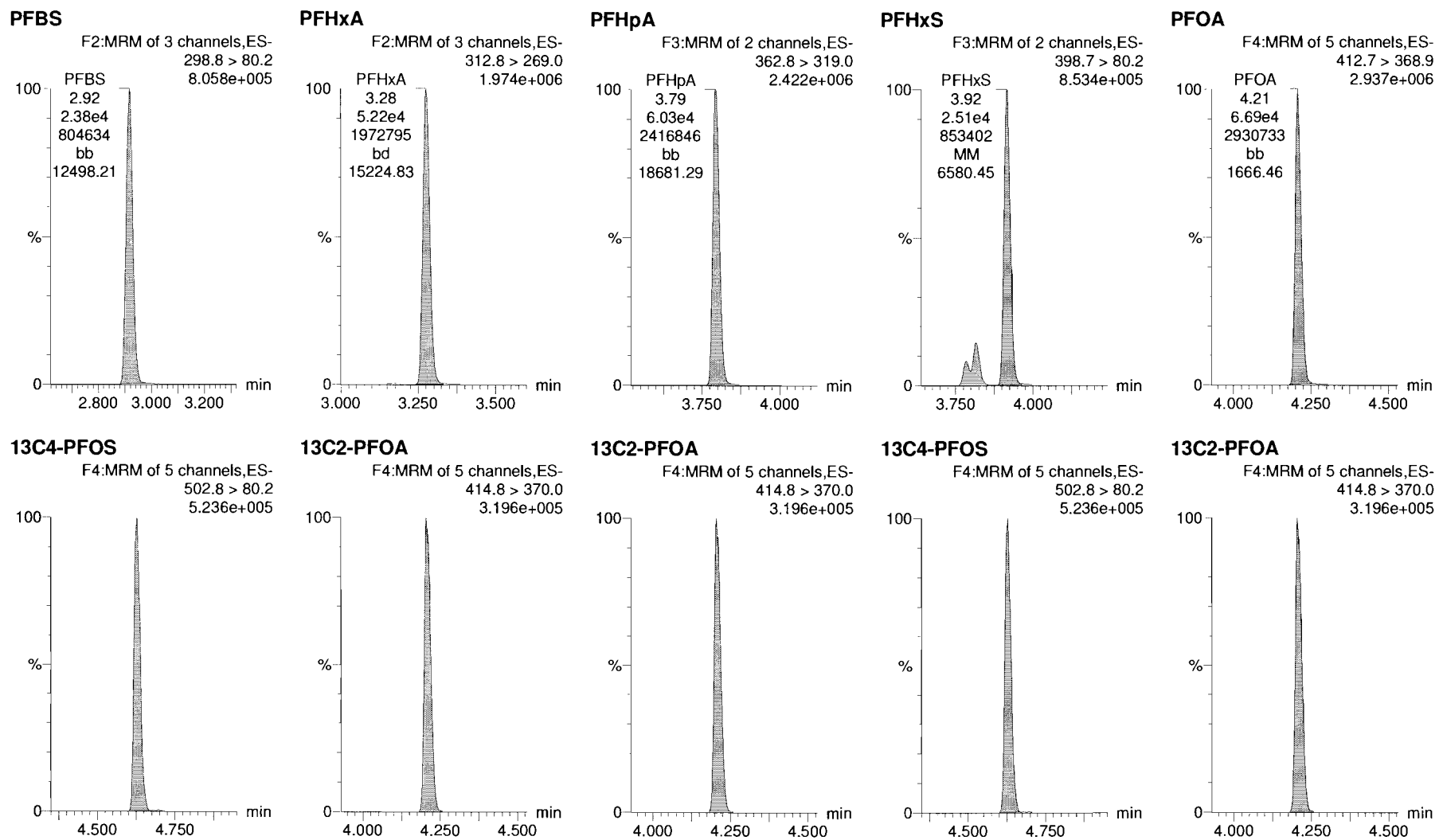


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Name: 181024G1\_10, Date: 24-Oct-2018, Time: 14:19:50, ID: ST181024G1-9 PFC CS4 537 18J1837, Description: PFC CS4 537 18J1837

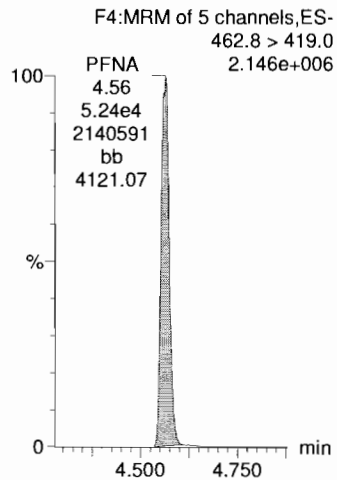


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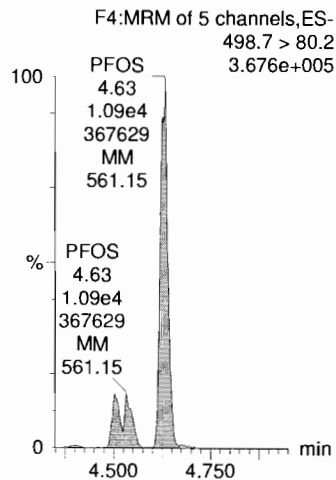
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Name: 181024G1\_10, Date: 24-Oct-2018, Time: 14:19:50, ID: ST181024G1-9 PFC CS4 537 18J1837, Description: PFC CS4 537 18J1837

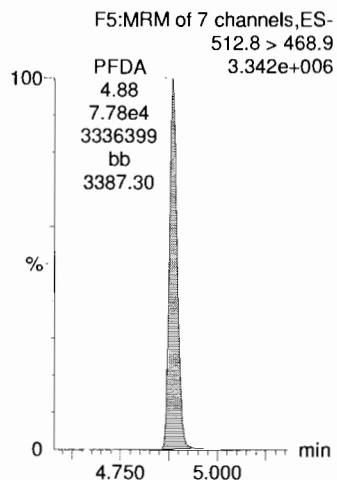
**PFNA**



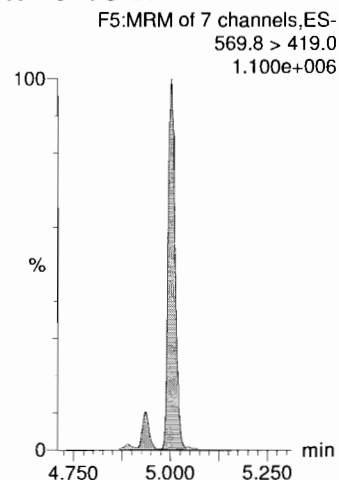
**PFOS**



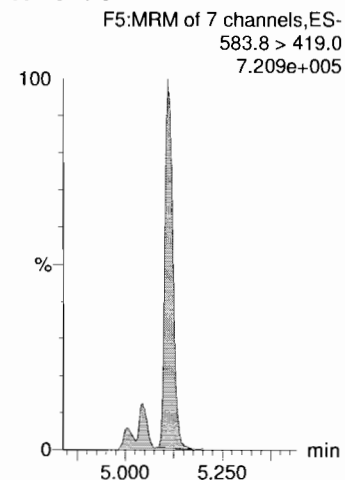
**PFDA**



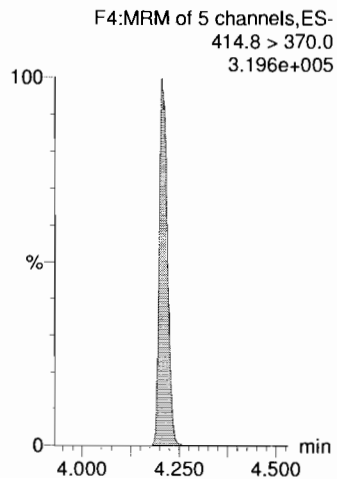
**N-MeFOSAA**



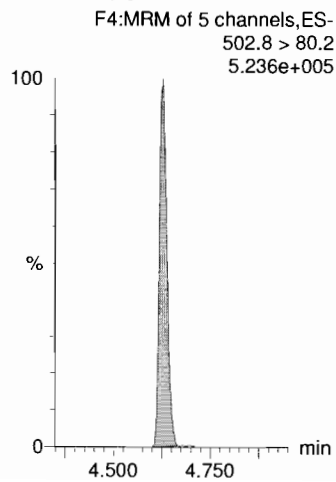
**N-EtFOSAA**



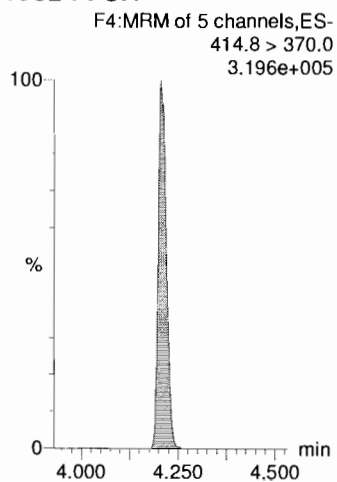
**13C2-PFOA**



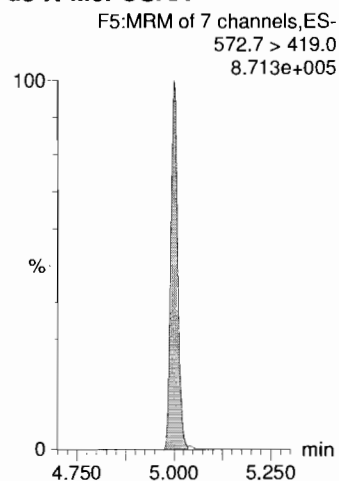
**13C4-PFOS**



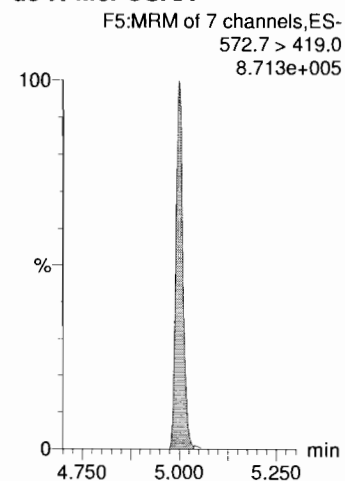
**13C2-PFOA**



**d3-N-MeFOSAA**



**d3-N-MeFOSAA**

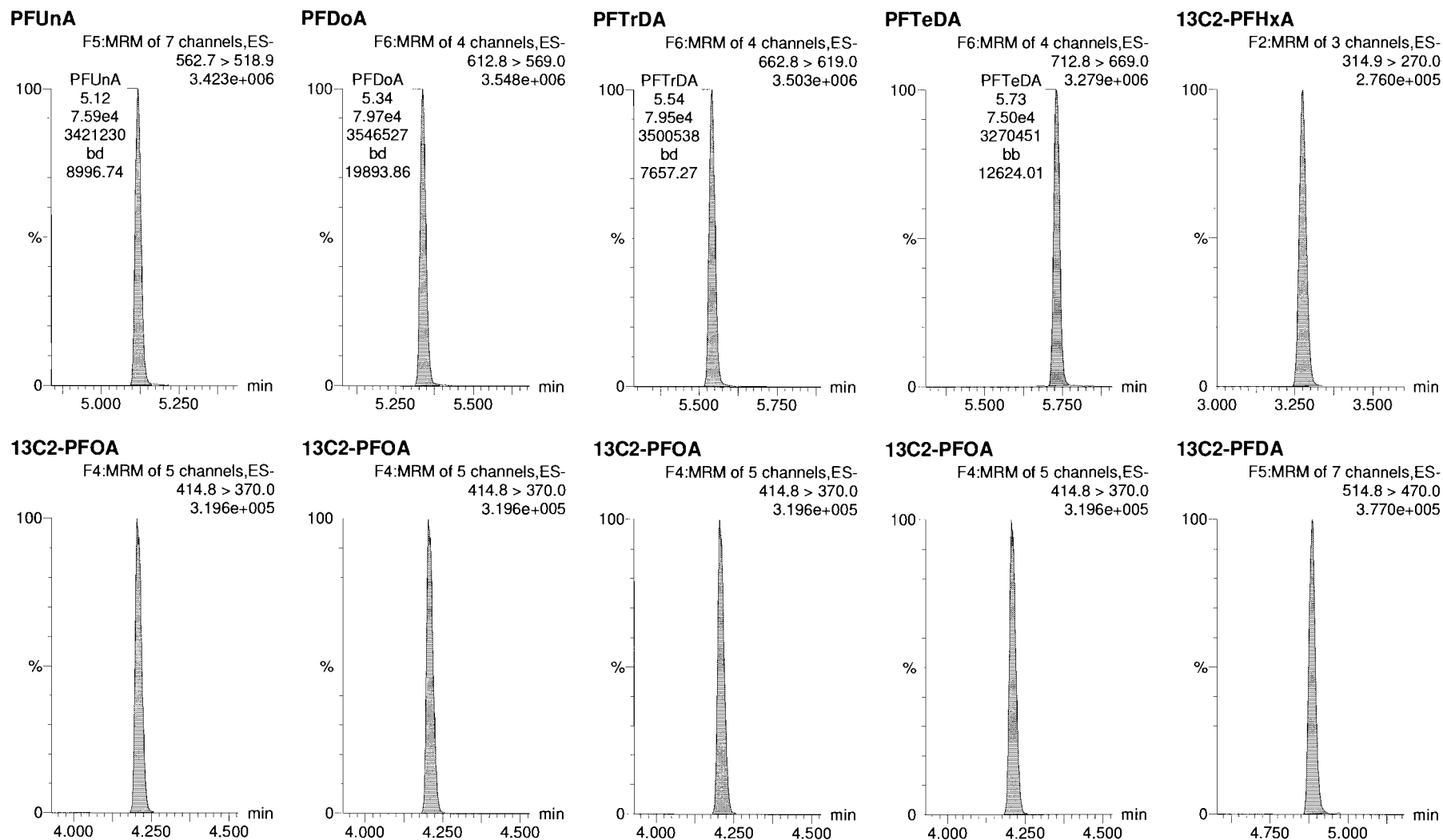


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Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_10, Date: 24-Oct-2018, Time: 14:19:50, ID: ST181024G1-9 PFC CS4 537 18J1837, Description: PFC CS4 537 18J1837



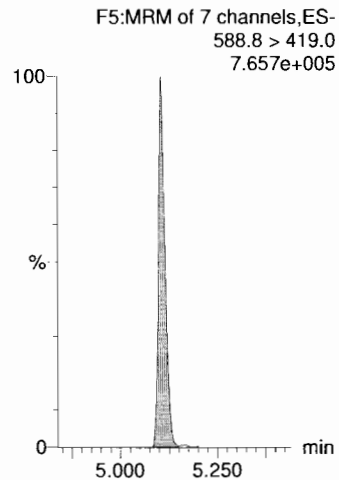
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Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_10, Date: 24-Oct-2018, Time: 14:19:50, ID: ST181024G1-9 PFC CS4 537 18J1837, Description: PFC CS4 537 18J1837

**d5-N-EtFOSAA**

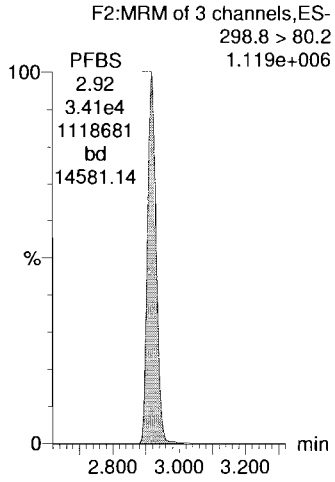


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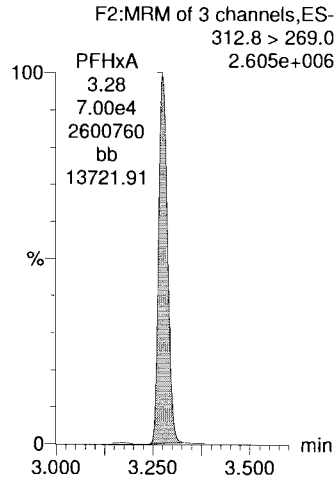
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Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_11, Date: 24-Oct-2018, Time: 14:32:50, ID: ST181024G1-10 PFC CS5 537 18J1838, Description: PFC CS5 537 18J1838

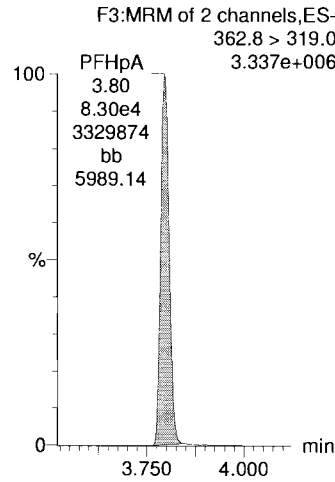
**PFBS**



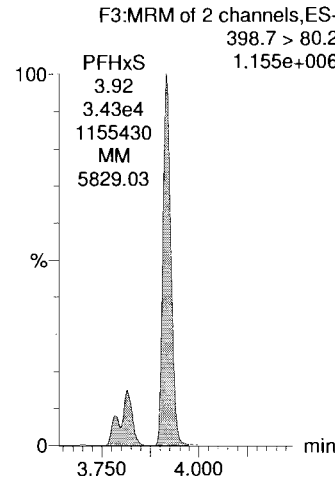
**PFHxA**



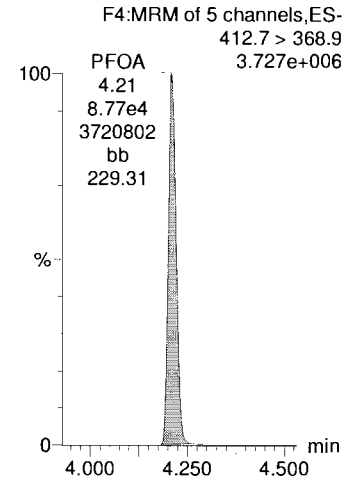
**PFHpA**



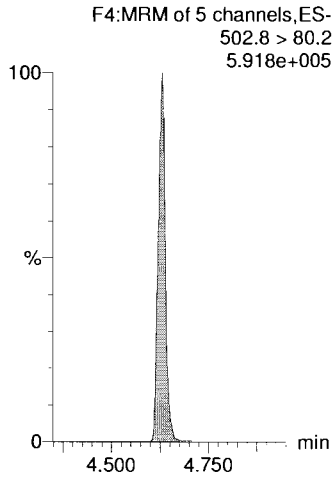
**PFHxS**



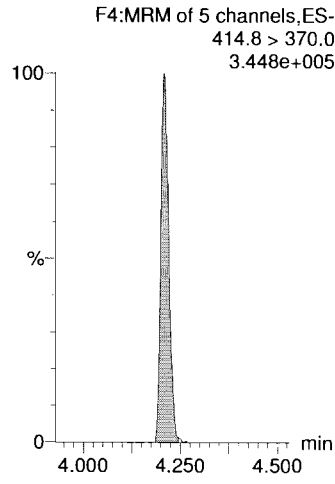
**PFOA**



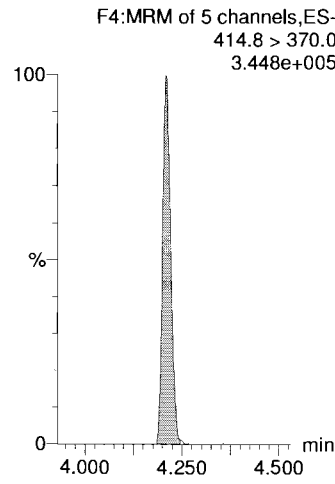
**13C4-PFOS**



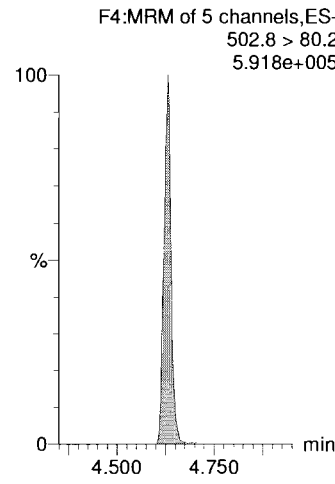
**13C2-PFOA**



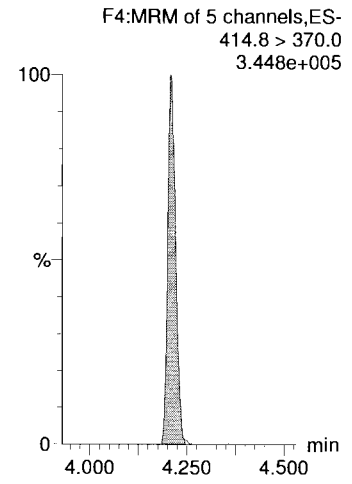
**13C2-PFOA**



**13C4-PFOS**



**13C2-PFOA**

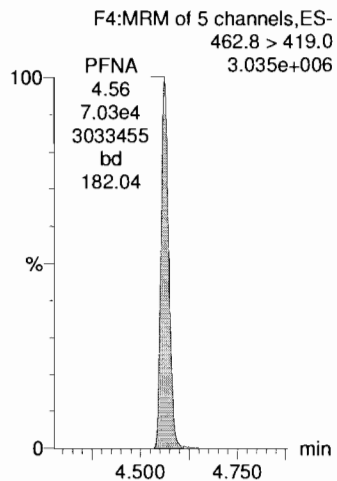


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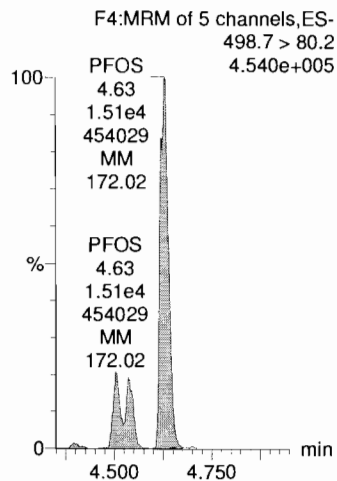
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Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_11, Date: 24-Oct-2018, Time: 14:32:50, ID: ST181024G1-10 PFC CS5 537 18J1838, Description: PFC CS5 537 18J1838

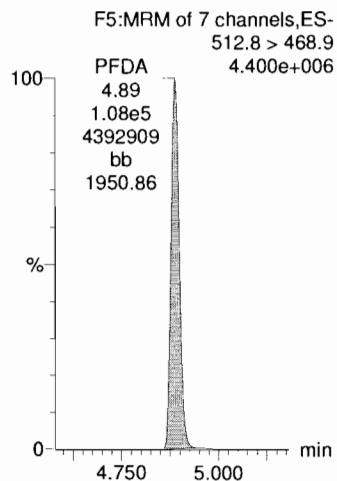
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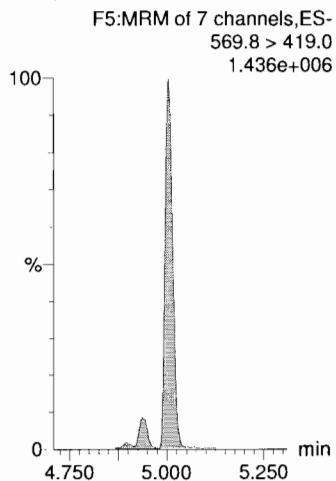
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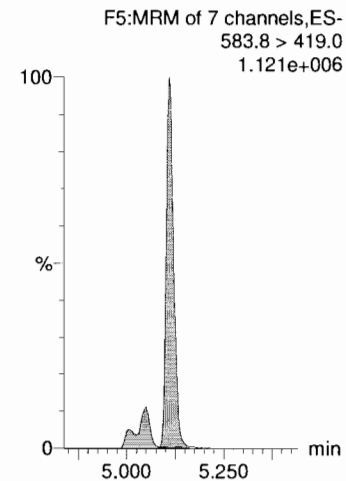
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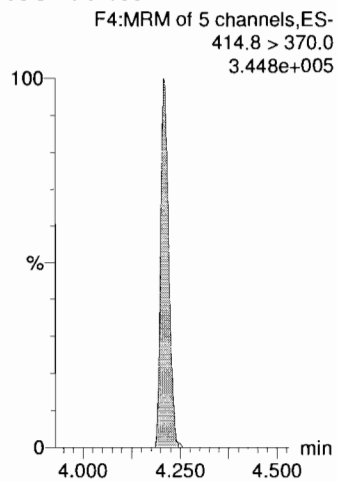
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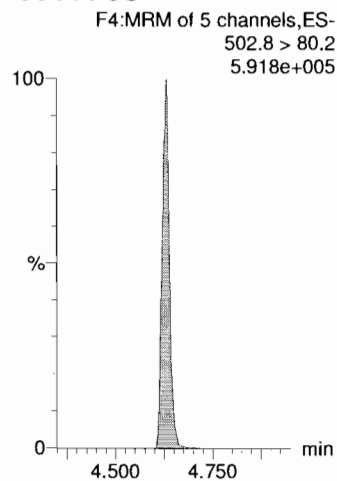
**N-EtFOSAA**



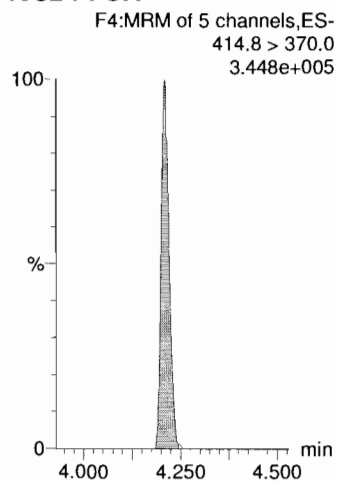
**13C2-PFOA**



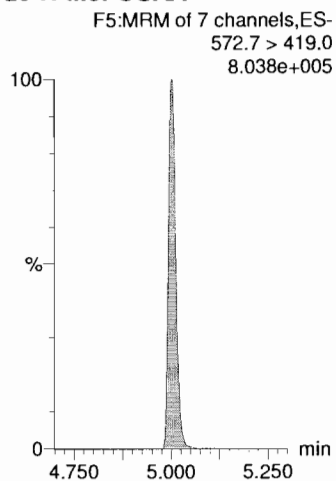
**13C4-PFOS**



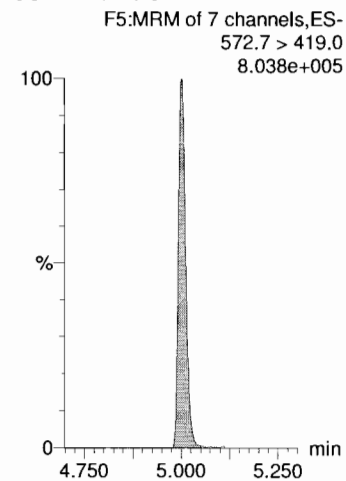
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**d3-N-MeFOSAA**



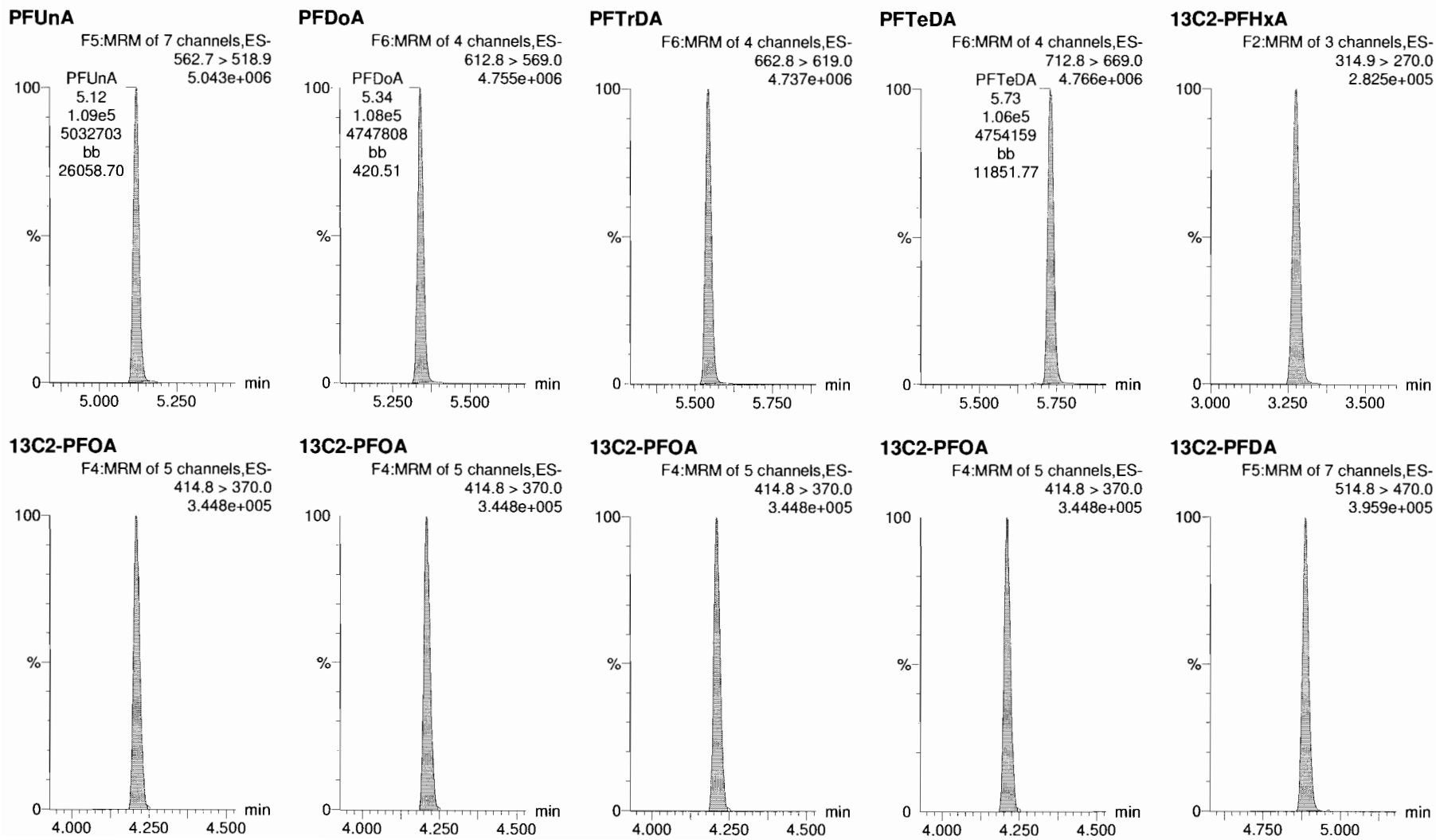
**d3-N-MeFOSAA**



Dataset: X:\G1.PRO\Results\2018\181024G1\181024G1-CRV.qld

Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_11, Date: 24-Oct-2018, Time: 14:32:50, ID: ST181024G1-10 PFC CS5 537 18J1838, Description: PFC CS5 537 18J1838





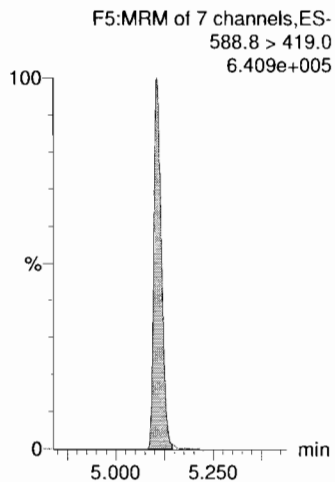
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Last Altered: Friday, October 26, 2018 10:23:39 Pacific Daylight Time

Printed: Friday, October 26, 2018 10:25:48 Pacific Daylight Time

Name: 181024G1\_11, Date: 24-Oct-2018, Time: 14:32:50, ID: ST181024G1-10 PFC CS5 537 18J1838, Description: PFC CS5 537 18J1838

**d5-N-EtFOSAA**



Dataset: X:\G1.PRO\Results\2018\181026G1\181026G1-ICV.qld

Last Altered: Friday, October 26, 2018 10:57:54 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:59:18 Pacific Daylight Time

*✓ AD 10/24/18*

Method: X:\G1.PRO\MethDB\PFAS\_DW\_L14\_1024.mdb 26 Oct 2018 10:20:09  
Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 10:23:39

Name: 181026G1\_2, Date: 26-Oct-2018, Time: 09:36:12, ID: ST181026G1-1 PFC ICV 537 18J1506, Description: PFC ICV 537 18J2506

#	Name	Trace	Area	IS Area	Wt./Vol.	RRF	Pred.RT	RT	y Axis Resp.	Conc.	%Rec
1	1 PFBS	298.8 > 80.2	3.59e3	1.31e4	1.00		2.91	2.92	7.87	9.01	90.1
2	2 PFHxA	312.8 > 269.0	7.19e3	8.62e3	1.00		3.27	3.29	8.35	9.71	97.1
3	3 PFHpA	362.8 > 319.0	8.62e3	8.62e3	1.00		3.80	3.79	10.0	9.86	98.6
4	4 PFHxS	398.7 > 80.2	3.75e3	1.31e4	1.00		3.91	3.92	8.23	9.41	94.1
5	5 PFOA	412.7 > 368.9	9.60e3	8.62e3	1.00		4.21	4.21	11.1	10.1	101.1
6	6 PFNA	462.8 > 419.0	7.58e3	8.62e3	1.00		4.55	4.56	8.80	9.93	99.3
7	7 PFOS	498.7 > 80.2	1.65e3	1.31e4	1.00		4.62	4.62	3.63	9.73	97.3
8	8 PFDA	512.8 > 468.9	1.09e4	8.62e3	1.00		4.89	4.85	12.7	9.51	95.1
9	9 N-MeFOSAA	569.8 > 419.0	2.88e3	1.83e4	1.00		5.00	5.00	6.31	8.19	81.9
10	10 N-EtFOSAA	583.8 > 419.0	2.78e3	1.83e4	1.00		5.10	5.09	6.08	9.49	94.9
11	11 PFUnA	562.7 > 518.9	1.08e4	8.62e3	1.00		5.10	5.10	12.5	9.53	95.3
12	12 PFDoA	612.8 > 569.0	1.03e4	8.62e3	1.00		5.34	5.32	12.0	9.01	90.1
13	13 PFTTrDA	662.8 > 619.0	1.11e4	8.62e3	1.00		5.54	5.55	12.9	9.47	94.7
14	14 PFTeDA	712.8 > 669.0	1.07e4	8.62e3	1.00		5.73	5.73	12.5	9.58	95.8
15	15 13C2-PFHxA	314.9 > 270.0	7.80e3	8.62e3	1.00	0.897	3.28	3.29	9.06	10.1	101.0
16	16 13C2-PFDA	514.8 > 470.0	8.52e3	8.62e3	1.00	1.160	4.84	4.86	9.89	8.53	85.3
17	17 d5-N-EtFOSAA	588.8 > 419.0	1.53e4	1.83e4	1.00	0.872	5.12	5.09	33.5	38.5	96.2
18	18 13C2-PFOA	414.8 > 370.0	8.62e3	8.62e3	1.00	1.000	4.21	4.21	10.0	10.0	100.0
19	19 13C4-PFOS	502.8 > 80.2	1.31e4	1.31e4	1.00	1.000	4.63	4.62	28.7	28.7	100.0
20	20 d3-N-MeFOSAA	572.7 > 419.0	1.83e4	1.83e4	1.00	1.000	4.99	4.99	40.0	40.0	100.0

*CAH  
10/26/18*

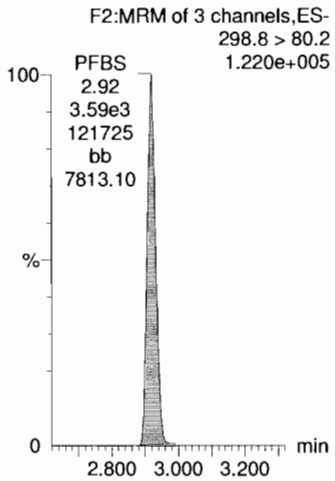
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Last Altered: Friday, October 26, 2018 10:57:54 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:59:18 Pacific Daylight Time

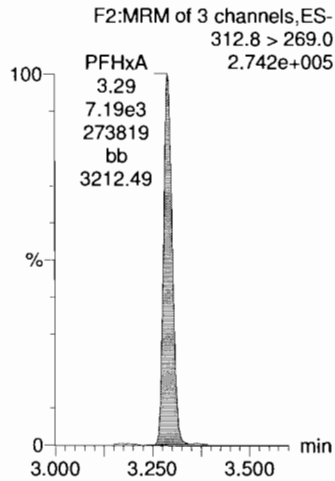
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Calibration: X:\G1.PRO\CurveDB\C18\_537\_Q1\_10-24-18\_L14.cdb 26 Oct 2018 10:23:39

Name: 181026G1\_2, Date: 26-Oct-2018, Time: 09:36:12, ID: ST181026G1-1 PFC ICV 537 18J1506, Description: PFC ICV 537 18J2506

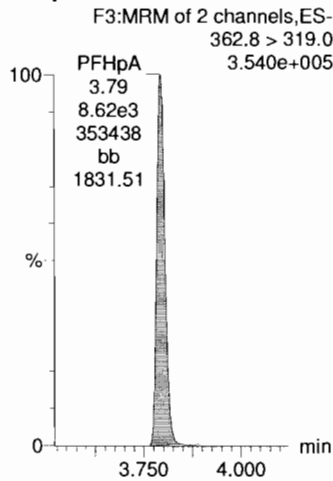
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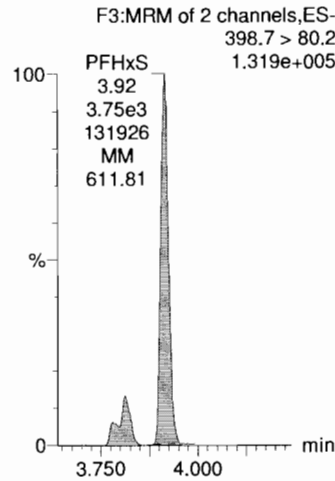
**PFHxA**



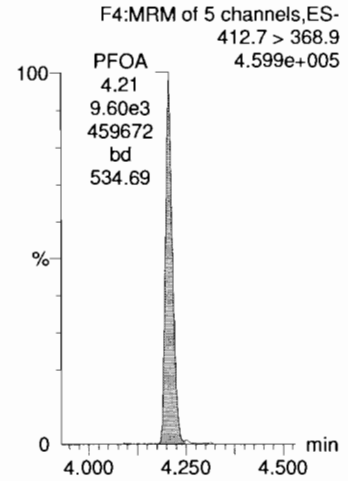
**PFHpA**



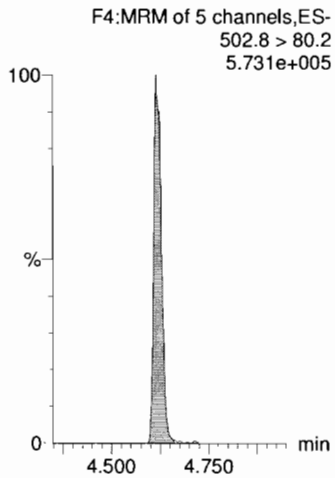
**PFHxS**



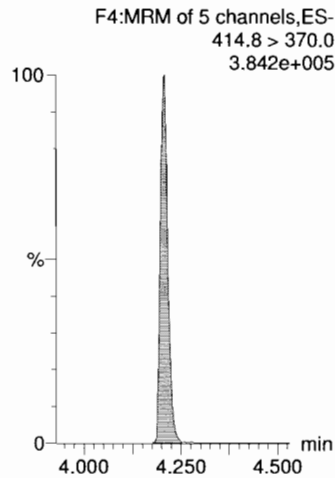
**PFOA**



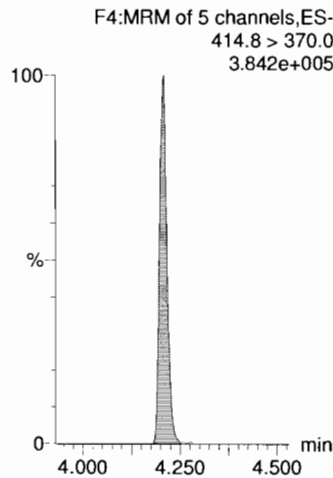
**13C4-PFOS**



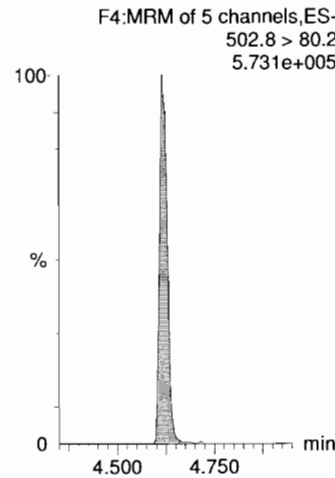
**13C2-PFOA**



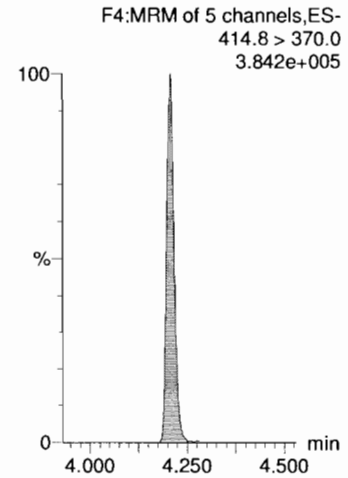
**13C2-PFOA**



**13C4-PFOS**



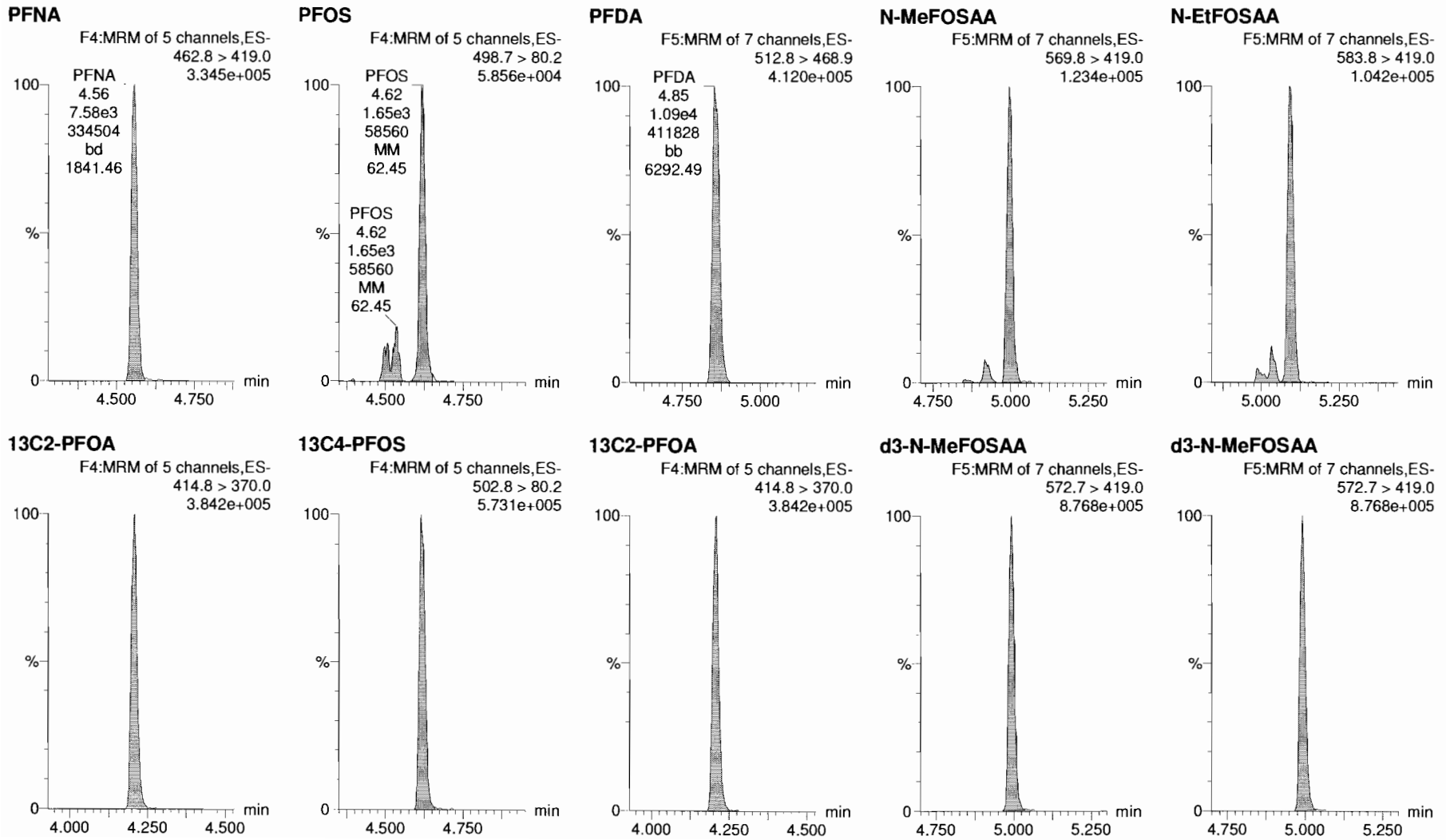
**13C2-PFOA**



Dataset: X:\G1.PRO\Results\2018\181026G1\181026G1-ICV.qld

Last Altered: Friday, October 26, 2018 10:57:54 Pacific Daylight Time  
Printed: Friday, October 26, 2018 10:59:18 Pacific Daylight Time

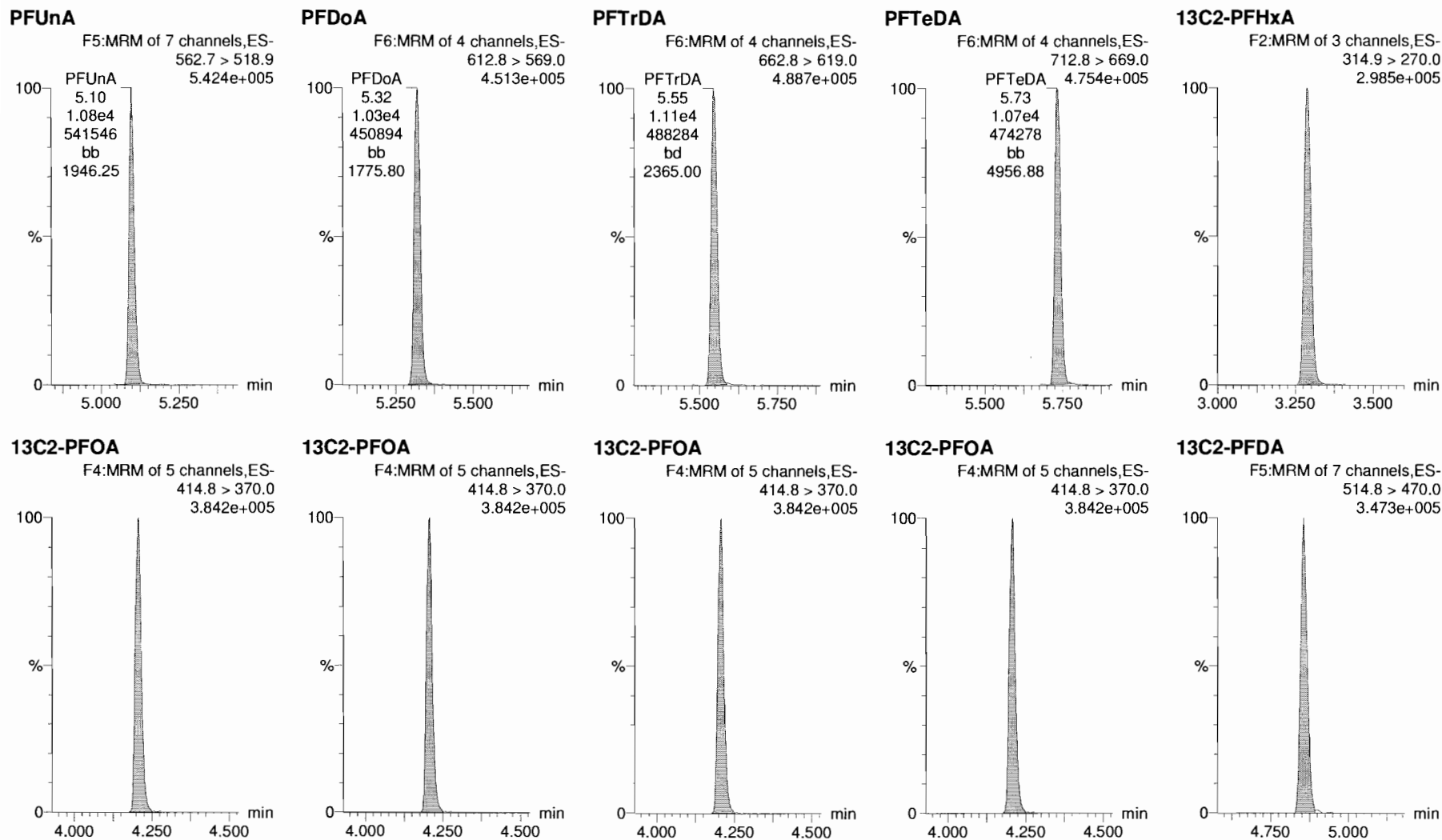
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Name: 181026G1\_2, Date: 26-Oct-2018, Time: 09:36:12, ID: ST181026G1-1 PFC ICV 537 18J1506, Description: PFC ICV 537 18J2506



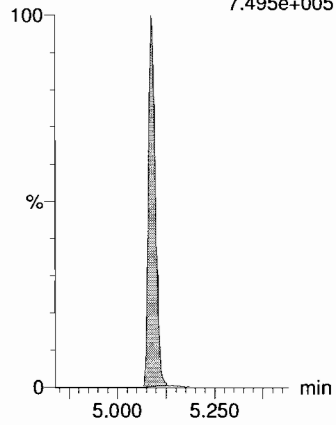
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Printed: Friday, October 26, 2018 10:59:18 Pacific Daylight Time

Name: 181026G1\_2, Date: 26-Oct-2018, Time: 09:36:12, ID: ST181026G1-1 PFC ICV 537 18J1506, Description: PFC ICV 537 18J2506

**d5-N-EtFOSAA**

F5:MRM of 7 channels,ES-  
588.8 > 419.0  
7.495e+005



Results

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	Date_Time_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	REG	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181107	16:22:00	1803499-01	1	1	
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N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	REG	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181107	16:22:00	1803499-01	1	1	
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N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	BLK	W	4	11/05/2018 08:45	11/05/2018			20181105	08:45:00	20181106	13:16:00	B8K0017-BLK1	1	1	
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N6247016D9000	0008		CHERRY_POINT_MCAS	Blank	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	BLK	W	4	11/05/2018 08:45	11/05/2018			20181105	08:45:00	20181106	13:16:00	B8K0017-BLK1	1	1	
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N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	BS	W	4	11/05/2018 08:45	11/05/2018			20181105	08:45:00	20181106	13:03:00	B8K0017-BS1	1	1	
N6247016D9000	0008		CHERRY_POINT_MCAS	LCS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	BS	W	4	11/05/2018 08:45	11/05/2018			20181105	08:45:00	20181106	13:03:00	B8K0017-BS1	1	1	
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N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118-MS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	MS	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181106	13:29:00	B8K0017-MS1	1	1	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118-MS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	MS	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181106	13:29:00	B8K0017-MS1	1	1	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118-MS	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	MS	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181106	13:29:00	B8K0017-MS1	1	1	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118-SD	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	MSD	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181106	13:42:00	B8K0017-MSD1	1	1	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118-SD	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	MSD	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181106	13:42:00	B8K0017-MSD1	1	1	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118-SD	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	MSD	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181106	13:42:00	B8K0017-MSD1	1	1	
N6247016D9000	0008		CHERRY_POINT_MCAS	CH-AT-1RW202-1118-SD	NONS	SVOA	537	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	NA	METHOD	000	MSD	W	4	11/02/2018 12:28	11/03/2018			20181105	08:45:00	20181106	13:42:00	B8K0017-MSD1	1	1	

Results

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.92	4.92	NG_L	U		PR	TRG									5.1	2.99	4.92	9.84	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.92	4.92	NG_L	U		PR	TRG										5.1	2.99	4.92	9.84	1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.92	4.92	NG_L	U		PR	TRG										5.1	2.99	4.92	9.84	1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	92.7	92.7	PCT_REC			PR	SURR		SLSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	87.5	87.5	PCT_REC			PR	SURR		SLSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.88	4.88	NG_L	U		PR	TRG										5.1	2.97	4.88	9.76	1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	4.88	4.88	NG_L	U		PR	TRG										5.1	2.97	4.88	9.76	1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	4.88	4.88	NG_L	U		PR	TRG										5.1	2.97	4.88	9.76	1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	92.4	92.4	PCT_REC			PR	SURR		SLSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	86.5	86.5	PCT_REC			PR	SURR		SLSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	5.00	5.00	NG_L	U		PR	TRG										5.1	3.04	5.00	10.0	1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	5.00	5.00	NG_L	U		PR	TRG										5.1	3.04	5.00	10.0	1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	5.00	5.00	NG_L	U		PR	TRG										5.1	3.04	5.00	10.0	1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	102	102	PCT_REC			PR	SURR		SLSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	91.8	91.8	PCT_REC			PR	SURR		SLSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	30.8	30.8	NG_L			PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	34.6	34.6	NG_L			PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	28.9	28.9	NG_L			PR	TRG		LSA	130	70					5.1	3.04	5.00	10.0	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	102	102	PCT_REC			PR	SURR		LSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	86.3	86.3	PCT_REC			PR	SURR		LSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	32.3	32.3	NG_L			PR	TRG		LSA	130	70					5.1	3.03	4.98	9.96	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	34.3	34.3	NG_L			PR	TRG		LSA	130	70					5.1	3.03	4.98	9.96	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	30.4	30.4	NG_L			PR	TRG		LSA	130	70					5.1	3.03	4.98	9.96	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	99.9	99.9	PCT_REC			PR	SURR		LSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	94.9	94.9	PCT_REC			PR	SURR		LSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorobutanesulfonic acid (PFBS)	375-73-5	28.6	28.6	NG_L			PR	TRG		LSA	130	70					5.1	3.03	4.98	9.97	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctanoic acid (PFOA)	335-67-1	34.2	34.2	NG_L			PR	TRG		LSA	130	70					5.1	3.03	4.98	9.97	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		Perfluorooctane Sulfonate (PFOS)	1763-23-1	28.9	28.9	NG_L			PR	TRG		LSA	130	70					5.1	3.03	4.98	9.97	1803499	S8K0013	
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFHxA	13C2-PFHxA	97.9	97.9	PCT_REC			PR	SURR		LSA	130	70						5.1				1803499	S8K0013
N6247016D9000	0008		CHERRY_POINT_MCAS		13C2-PFDA	13C2-PFDA	92.8	92.8	PCT_REC			PR	SURR		LSA	130	70						5.1				1803499	S8K0013



**DATA VALIDATION SUMMARY REPORT  
MCOLF ATLANTIC, NORTH CAROLINA**

Client: CH2M HILL, Inc., Corvallis, Oregon  
 SDG: 1803499  
 Laboratory: Vista Analytical Laboratory, El Dorado Hills, California  
 Site: MCOLF Atlantic, North Carolina  
 Date: December 1, 2018

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	CH-AT-1RW202-1118	1803499-01	Water
1MS	CH-AT-1RW202-1118MS	1803499-01MS	Water
1MSD	CH-AT-1RW202-1118MSD	1803499-01MSD	Water
2	CH-AT-1FB202-1118	1803499-02	Water

A full data validation was performed on the analytical data for one water sample and one aqueous field blank sample collected on November 2, 2018 by CH2M HILL at the MCOLF Atlantic site in Atlantic, North Carolina. The samples were analyzed under the EPA Method “Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)”.

Specific method references are as follows:

Analysis  
PFCs

Method References  
USEPA Method 537, Rev 1.1

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM), Version 5.0 (July 2013) and the USEPA National Functional Guidelines for Organic Data Review as follows:

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

The following data quality indicators were reviewed for this report:

***Organics***

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Liquid Chromatography/Mass Spectrometry (LC/MS) Tuning

- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

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

### **Data Usability Assessment**

There were no rejections of data.

Overall the data is acceptable for the intended purposes. There were no qualifications.

### **Perfluorinated Compounds (PFCs)**

### **Data Completeness, Case Narrative & Custody Documentation**

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

### **Holding Times**

- All samples were extracted within 14 days for water samples and analyzed within 28 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) and RRF criteria were met.

### Method Blank

- The method blanks were free of contamination.

### Field QC Blank

- Field QC samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CH-AT-1FB202-1118	None - ND	-	-	-

### Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

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

- The MS/MSD samples exhibited acceptable %R and RPD values.

### Laboratory Control Samples

- The LCS samples exhibited acceptable percent recoveries (%R).

### Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

### Target Compound Identification

- All mass spectra and quantitation criteria were met.

### Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 12/1/18  
Nancy Weaver  
Senior Chemist

<b>Data Qualifier</b>	<b>Definition</b>
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.
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 limit 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.



Sample ID: CH-AT-1RW202-1118						EPA Method 537					
Client Data					Laboratory Data						
Name:	CH2M Hill		Matrix:	Drinking Water		Lab Sample:	1803499-01		Column:	BEH C18	
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigation		Date Collected:	02-Nov-18 12:28		Date Received:	03-Nov-18 09:55				
Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
PFOA	335-67-1	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
PFOS	1763-23-1	ND	2.99	4.92	9.84		B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.7	70 - 130			B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1	
13C2-PFDA	SURR	87.5	70 - 130			B8K0017	05-Nov-18	0.254 L	07-Nov-18 16:22	1	

DL - Detection Limit

LOD - Limit of Detection

Results reported to the DL.

LOQ - Limit of quantitation

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

rwiz11.8

Sample ID: CH-AT-1FB202-1118							EPA Method 537				
Client Data				Laboratory Data							
Name:	CH2M Hill	Matrix:	Drinking Water	Lab Sample:	1803499-02	Column:	BEH C18				
Project:	CTO-08, MCOLF Atlantic PFAS DW Investigation	Date Collected:	02-Nov-18 12:29	Date Received:	03-Nov-18 09:55						
Analyte	CAS Number	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution
PFBS	375-73-5	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
PFOA	335-67-1	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
PFOS	1763-23-1	ND	2.97	4.88	9.76		B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1
Labeled Standards	Type	% Recovery	Limits		Qualifiers	Batch	Extracted	Samp Size	Analyzed	Dilution	
13C2-PFHxA	SURR	92.4	70 - 130			B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1	
13C2-PFDA	SURR	86.5	70 - 130			B8K0017	05-Nov-18	0.256 L	06-Nov-18 14:08	1	

DL - Detection Limit

LOD - Limit of Detection  
LOQ - Limit of quantitation

Results reported to the DL.

When reported, PFHxS, PFOA, PFOS, MeFOSAA and EtFOSAA include both linear and branched isomers. Only the linear isomer is reported for all other analytes.

revised 11/18





- Legend**
- Proposed Sample Location
  - ⊠ Public Water Supply Well
  - ➡ Direction of Groundwater Flow
  - MCOLF Atlantic - 1-mile zone
  - ⋯ Base Boundary
  - ▭ Site Boundary (suspected source)
  - ▭ Parcels

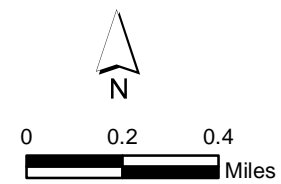


Figure 3  
Proposed Sampling Locations  
Marine Corps Outlying Landing Field Atlantic  
Atlantic Beach, North Carolina